

**EPA Reg. No. 19713-668**  
**Vol. 1 Part 2**

## Adeeb, Shanta

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**From:** Luz Chan <lchan@drexchem.com>  
**Sent:** Friday, July 28, 2017 5:22 PM  
**To:** Adeeb, Shanta  
**Cc:** Scott Pace  
**Subject:** FW: Label Amendment for EPA Reg. No. 19713-668

Shanta, good afternoon.

It was decided here that we will withdraw the submission for 19713-600 (Tech) and 19713-668 (EUP) resubmit the same with a fee required for PRIA action R352.

I'll submit on Monday next week.

Thank you,

Luz

**From:** Luz Chan  
**Sent:** Thursday, July 27, 2017 1:11 PM  
**To:** 'Adeeb, Shanta' <Adeeb.Shanta@epa.gov>  
**Subject:** RE: Label Amendment for EPA Reg. No. 19713-668

Thanks, Shanta. I'll pass this on and let them decide how to proceed.

I will let you know when I hear back.

Thanks you,

Luz

**From:** Adeeb, Shanta [mailto:Adeeb.Shanta@epa.gov]  
**Sent:** Thursday, July 27, 2017 12:37 PM  
**To:** Luz Chan <lchan@drexchem.com>  
**Subject:** RE: Label Amendment for EPA Reg. No. 19713-668

That is correct.

**From:** Luz Chan [mailto:lchan@drexchem.com]  
**Sent:** Thursday, July 27, 2017 11:52 AM  
**To:** Adeeb, Shanta <Adeeb.Shanta@epa.gov>  
**Cc:** Scott Pace <space@drexchem.com>  
**Subject:** RE: Label Amendment for EPA Reg. No. 19713-668

Shanta,

I left you a VM.

You mentioned earlier that if we do use a cite all method of support, then, the submission will not be covered under a PRIA action. All I need to do is submit a revised data matrix and certification with respect to citation of data.

Scott want you to please confirm.

Thank you,

Luz

**From:** Adeeb, Shanta [mailto:Adeeb.Shanta@epa.gov]  
**Sent:** Thursday, July 27, 2017 9:06 AM



# FAST-TRACK AMENDMENTS – Completeness Screening Checklist

Expert's In-Processing Signature:

*K. M. M. G.*

Date:

7/11/17

PM #:

25

EPA Reg. Number:

19713-668

EPA Receipt Date:

7/3/17

|   | Checklist Item  | Yes                                 | No                                  | N/A |
|---|---|-------------------------------------|-------------------------------------|-----|
| 1 | <b>Application Form</b> (EPA Form 8570-1) - signed?                                 | <input checked="" type="checkbox"/> |                                     |     |
| 2 | <b>Confidential Statement of Formula</b> (EPA Form 8570-29) - signed?               |                                     |                                     |     |
| 3 | <b>Certification with Respect to Citation of Data</b> (EPA Form 8570-34) - signed?  |                                     |                                     |     |
| 4 | <b>Formulator's Exemption Statement</b> (EPA Form 8570-27) - signed?                |                                     |                                     |     |
| 5 | <b>Data Matrix</b> (EPA Form 8570-35) [Applicable for adding me-too uses] - signed? |                                     |                                     |     |
|   | a) Selective Method?  |                                     |                                     |     |
|   | b) Cite-All Method?   |                                     |                                     |     |
|   | c) Public copy of Matrix provided? See PR Notice 98-5                               |                                     |                                     |     |
| 6 | <b>Is Label included?</b> (5 copies)  | <input checked="" type="checkbox"/> |                                     |     |
|   | a) Electronic Label submitted?  |                                     | <input checked="" type="checkbox"/> |     |
|   | <b>Comments:</b>  |                                     |                                     |     |



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

July 5, 2017

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

LUZ G. CHAN  
DREXEL CHEMICAL COMPANY  
PO Box 13327  
MEMPHIS, TN 38113-0327

PRODUCT NAME: PIN-DEE 3.3 EC  
COMPANY NAME: DREXEL CHEMICAL COMPANY  
OPP IDENTIFICATION NUMBER:  
EPA FILE SYMBOL: 19713-668  
EPA RECEIPT DATE: 07/03/17

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application appears to qualify for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability for fast track status.

If you have any questions, please contact Registration Division, Risk Management Team 25, at (703) 305-7356.

Sincerely,

Front End Processing Staff  
Information Services Branch  
Information Technology & Resources Management Division

8

**Fee for Service**

{1005638Z~

This package includes the following

for Division

☐ New Registration

☒ Amendment

☐ AD

☐ BPPD

☒ RD

☐ Studies? ☐ Fee Waiver?

☐ volpay % Reduction: \_\_\_\_\_

Risk Mgr. 25

Receipt No.

S- 1005638

EPA File Symbol/Reg. No.

19713-668

Pin-Punch Date:

7/3/2017

✓ This item is NOT subject to FFS action.

Action Code:

Parent/Child Decisions:

Requested:

Granted:

Amount Due: \$ \_\_\_\_\_

☐ Inert Cleared for Intended Use

☐ Uncleared Inert in Product

Reviewer: 

Date: 6.5.17

Remarks:



**Drexel Chemical Company**

June 28, 2017

Document Processing Desk (AMEND)  
**ATTN: MR. REUBEN BARIS, PM 25**  
Office of Pesticide Programs (7505P)  
U.S. Environmental Protection Agency  
Rm S-4900, One Potomac Yard  
2777 S Crystal Drive, Arlington, VA 22202

***Re: Submission of Revised PIN-DEE 3.3 EC (Reg. No. 19713-668) Label in Conjunction with the Proposed Amendment for Drexel Pendimethalin Technical (EPA Reg. No. 19713-600) Submitted on June 28, 2017***

Dear Mr. Baris,

In conjunction with our amendment submission to the Agency dated June 28, 2017 to add use Alfalfa and Wheat on the Drexel Pendimethalin Technical (Reg. No. 19713-600) label, we would like to submit the following for our end-use product, Pin-Dee 3.3 EC (19713-668):

1. Completed EPA Form 8570-1
2. Copy of the currently EPA accepted label with the marked up changes.
3. Three copies of the revised label with the proposed changes to be in line with the uses being proposed added to the Drexel Pendimethalin Technical label:

On page 1:

- Added "Alfalfa" and "Wheat" to the statement appearing above the ingredient statement. Also deleted "Except Alfalfa" from the statement.

On page 8:

- Added "Alfalfa grown for forage, hay or seed production" to the statement under "Chemigation Application (Via Flooded Basin Irrigation Systems)".
- Added "Alfalfa" to the #6 statement under "Use Instructions and Restrictions...."

On pages 12 to 13:

- Added the use directions for Alfalfa grown for forage, hay or seed production.

On pages 30 to 31:

- Added use directions for Wheat.

If you have questions/clarification regarding this submission, I can be reached at (901) 774-4370 or e-mail lchan@drexchem.com. Thank you.

Respectfully yours,  
FOR DREXEL CHEMICAL COMPANY

  
Luz Chan

Registration Manager

1700 Channel Avenue • Post Office Box 13327 • Memphis, Tennessee 38113-0327  
Phone: (901) 774-4370 • Fax: (901) 774-4666 • E-Mail: info@drexchem.com • www.DrexChem.com

**SINCE 1972**



United States  
Environmental Protection Agency  
Washington, DC 20460

☐  
☒  
☐

Registration  
Amendment  
Other

OPP Identifier Number

### Application for Pesticide - Section I

|   |  |  |
|---|--|--|
| 1. Company/Product Number<br>19713-668  | 2. EPA Product Manager<br>Reuben Baris   | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>PIN-DEE 3.3 EC   | PM#<br>25  |  |
| 5. Name and Address of Applicant (Include ZIP Code)<br>Drexel Chemical Company<br>P.O. Box 13327<br>Memphis, TN 38113-0327<br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |  |

### Section - II

|  |  |
|--|--|
| <input checked="" type="checkbox"/> Amendment - Explain below.                 | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.   |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.  |

**Explanation:** Use additional page(s) if necessary. (For section I and Section II.)

Submission of revised label in conjunction with the proposed label amendment for Drexel Pendimethalin Technical (19713-600) submitted to EPA on June 28, 2017 along with this submission adding Alfalfa and Wheat. Details are in the cover letter accompanying this submission.

### Section - III

|  |  |   |   |   |  |
|--|--|---|---|---|--|
| 1. Material This Product Will Be Packaged In:  |  |   |   | 2. Type of Container  |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No  | Unit Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No |   | <input checked="" type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |  |
| * Certification must be submitted  |  | If "Yes" Unit Packaging wgt. No. per container  | If "Yes" Package wgt. No. per container |   |  |
| 3. Location of Net Contents Information<br><input checked="" type="checkbox"/> Label <input type="checkbox"/> Container  |  | 4. Size(s) Retail Container<br>less than 5 gallons; 5 gals. and greater                           |   | 5. Location of Label Directions<br><input type="checkbox"/> On the label  |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper, glued<br><input type="checkbox"/> Stenciled |  | <input type="checkbox"/> Other _____  |   |   |  |

### Section - IV

|  |  |   |   |
|--|--|---|---|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)  |  |   |   |
| Name<br>LUZ G CHAN   |  | Title<br>REGISTRATION MANAGER                       |   |
|  |  | Telephone No. (Include Area Code)<br>(901) 774-4370 |   |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |   | 6. Date Application Received<br><br>(Stamped) |
| 2. Signature<br>   |  | 3. Title<br>REGISTRATION MANAGER                    |   |
| 4. Typed Name<br>LUZ G CHAN  |  | 5. Date<br>06/28/2017                               |   |
|  |  |   |   |



# PROCESSING REQUEST

Reg # 19713-668

Decision # 525539

Description: CSF Amendment

## Material Available Electronically (see PPLS):

☐ Electronic Label/Letter Dated

☐ Other:

## Material Sent (see jacket):

☐ Stamped Label/Letter Dated

☐ Notification Dated

☒ New CSF(s) Dated 1/12/17

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Emily Schmid

Division: RD/HB

Phone: 347-0189

Date: 6/15/17



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

June 9, 2017

Luz G. Chan  
Registration Manager  
Drexel Chemical Company  
P.O. Box 13327  
Memphis, TN 38113-0327

Subject: Label and CSF Amendment – Adding Use Sites to Label and Alternate CSF #2  
Product Name: Pin-Dee 3.3 EC  
EPA Registration Number: 19713-668  
Application Date: January 12, 2017  
Decision Numbers: 525538 & 525539

Dear Ms. Chan:

The amended label and CSF referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, are acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Please note that the record for this product currently contains the following CSFs:

- Basic CSF dated 2/23/2015
- Alternate CSF 1 dated 2/23/2015
- Alternate CSF 2 dated 1/12/2017

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process.

Page 2 of 2  
EPA Reg. No. 19713-668  
Decision No. 525538

Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Emily Schmid by phone at 703-347-0189, or via email at [schmid.emily@epa.gov](mailto:schmid.emily@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Reuben Baris", with a stylized flourish at the end.

Reuben Baris, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure



Drexel

**Pin-Dee™ 3.3 EC**  
Herbicide

For use on Bearing Citrus Fruit Trees, Bearing Nut Trees, Bearing Pome Fruit Trees, Bearing Stone Fruit Trees, Carrots, Carrots Grown For Seed, Corn (Field, Pop, Seed, Sweet), Cotton, Edible Beans, Forage Legumes (Except Alfalfa), Fruiting Vegetables (Pepper, Tomatoes), Garlic, Grain Sorghum, Juneberry, Leek, Lentils, Mint, Nonbearing Fruit Tree and Nut Trees, Nonbearing Vineyards, Onions (Dry, Bulb, Green), Peas, Pomegranate, Shallots, Peanuts, Potatoes, Rice, Soybeans, Strawberries, Sugarcane, Sunflowers, Tobacco.

**ACTIVE INGREDIENT:**

Pendimethalin..... 37.4%

**OTHER INGREDIENTS:**..... 62.6%**TOTAL:**..... 100.0%

This product contains 3.3 pounds of pendimethalin per gallon.

\* Contains petroleum distillate.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

See FIRST AID Below

**ACCEPTED**

06/09/2017

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 19713-668

EPA Reg. No. 19713-668

EPA Est. No. 19713-XX-X

Net Content: \_\_\_\_\_ Gals. ( \_\_\_\_\_ L)

**FIRST AID****IF SWALLOWED:**

- Immediately call a poison control center or doctor for treatment advice.
- Do not give any liquid to person.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for medical emergency information.

**NOTE TO PHYSICIAN:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Manufactured By:

**Drexel Chemical Company**

P.O. BOX 13327, MEMPHIS, TN 38113-0327

**SINCE 1972**

668SP-0117\*P

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

**CAUTION:** Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE CLOTHING (PPE)

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils or viton  $\geq$  14 mils and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

## USER SAFETY RECOMMENDATIONS

**Users should:** 1) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 2) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide protection.

This label must be in the possession of the user at the time of pesticide application. Observe all precautions and restrictions in this label and the labels of products used in combination with this product. The use of this product not consistent with this label can result in injury to crops, animals or persons.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands or animals.

Do not enter or allow other people (or pets) to enter the treated area until sprays have dried.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), notification to workers and Restricted Entry Interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

**Do not enter or allow worker entry to treated areas during the REI of 24 hours.**

**Exception:** If the product is soil-injected or soil-incorporated, the WPS, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated such as plants, soil or water is: Coveralls, chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils or viton  $\geq$  14 mils and shoes plus socks.

## PRODUCT INFORMATION

PIN-DEE 3.3 EC is a selective herbicide for controlling most annual grasses and certain broadleaf weeds as they germinate. This product will not control established weeds. Destroy emerged weeds prior to application.

This product is most effective in controlling weeds mechanically incorporated or when incorporated into the weed germination zone by adequate rainfall or overhead irrigation after application.

Unusually cold, excessively wet or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

Uneven application or improper soil incorporation can decrease weed control or cause crop injury. Soil incorporation deeper than directed can reduce weed control. Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration or drought can weaken seedlings and plants and increase the possibility of crop damage from this product. Under these conditions, crop yields can be reduced.

In the event of crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted without adverse effects the same year (see "CROPS" section for exceptions)

## ENDANGERED SPECIES PROTECTION

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your country or parish has a bulletin, and to obtain that bulletin, consult <http://www.epa.gov/espp/> or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use bulletins that are in effect in the month in which the pesticide will be applied. New bulletins will generally be available from the above sources 6 months prior to their effective dates.

If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASABE fine to medium/coarse nozzles.
- If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger). Wind can be no more than 8 mph and release height must be 15 feet or less.

## RESISTANCE MANAGEMENT

|       |   |           |
|-------|---|-----------|
| GROUP | 3 | HERBICIDE |
|-------|---|-----------|

This product is a Group 3 herbicide. It is a meristematic inhibitor that interferes with the plant's cellular division or mitosis. This and/or other products with the meristematic inhibiting mode of action may not effectively control naturally occurring biotypes of some of the weeds listed on this label. A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct genetic makeup from other plants. Other herbicides with the meristematic inhibiting mode of action include other dinitroaniline herbicides such as trifluralin.

Weed species with acquired resistance to Group 3 herbicides may eventually dominate the weed population if Group 3 herbicides are used repeatedly in the same field or in successive years as primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 3 herbicides. To delay herbicide resistance, consider:

- Avoiding the consecutive use of this product or other target site of action Group 3 herbicides that have a similar target site of action on the same weed species.
- Using tank-mixtures or pre-mixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank-mix or pre-pack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

## WEEDS CONTROLLED

See "CROPS" section for additional weeds controlled.

| Weeds Controlled By Up to 2.4 Quarts of This Product Per Acre   |   |   |
|---|---|---|
| Grasses   |   |   |
| Annual ryegrass<br>Barnyardgrass<br>Canarygrass* <sup>a</sup><br>Cheat* <sup>a</sup><br>Crabgrass<br>Crowfootgrass<br>Downy brome* (Cheatgrass)<br>Foxtail (Giant)<br>Foxtail (Green) | Foxtail (Yellow)<br>Goosegrass<br>Hairy chess* <sup>b</sup><br>Itchgrass*<br>Italian ryegrass*<br>Japanese brome* <sup>b</sup><br>Johnsongrass (Seedling)<br>Jointed goatgrass* <sup>b</sup><br>Oat (Wild)* | Panicum (Fall)<br>Panicum (Texas)<br>Sandbur (Field)<br>Shattercane*<br>Signalgrass*<br>Wild proso millet*<br>Witchgrass<br>Wooly cupgrass* |
| Broadleaves   |   |   |
| Amaranth (Palmer)<br>Bugloss (Small) <sup>b</sup><br>Carpetweed<br>Chickweed (Common)*<br>Henbit<br>Kochia<br>Lady's thumb  | Lambsquarters (Common)<br>Lambsquarters (Slimleaf)<br>London rocket*<br>Mustard (Black) <sup>a</sup><br>Pigweed spp.<br>Purslane<br>Pusley (Florida)  | Shepherdspurse*<br>Smartweed (Pennsylvania)*<br>Spurge (annual)<br>Velvetleaf*<br>Waterhemp spp.  |
| *Suppression but controlled when use rate of this product is greater than 2.4 quarts per acre   |   |   |
| <sup>a</sup> Not controlled in California.  |   |   |
| <sup>b</sup> Neither suppressed nor controlled in California.   |   |   |

| Weeds Controlled By 2.4 Quarts or Greater of This Product Per Acre  |  |  |
|---|--|--|
| Grasses   |  |  |
| Annual bluegrass<br>Browntop Panicum<br>Guinea grass <sup>a</sup>   | Junglerice<br>Lovegrass<br>Sprangletop (Mexican) | Sprangletop (Red)<br>Swollen fingergrass |
| Broadleaves   |  |  |
| Dodder*<br>Fiddleneck   | Knotweed (Prostate)<br>Morningglory**            | Puncturevine                             |
| *Use the highest labeled rate of this product specified in the specific crop for optimum control of Dodder. |  |  |
| **Suppression   |  |  |
| <sup>a</sup> Not controlled in California.  |  |  |

## APPLICATION RATE

Use rates for this product when used alone, in tank-mix or sequential applications are given in the "CROPS" section. Use rates of this product vary by soil texture and organic matter. See the following table for soil texture groupings used in this label.

| Soil Texture  | Soil Type   |
|---|---|
| Coarse  | Loamy sand, Sand, Sandy loam                        |
| Medium  | Loam, Sandy clay, Sandy clay loam*, Silt, Silt loam |
| Fine  | Clay, Clay loam, Silty clay, Silty clay loam*       |
| Peat and Muck**   | -   |
| *Sometimes considered as transitional soils and may be classified as either medium or fine textured soil.   |   |
| **This product may be used on peat and muck soils but weed control may be inconsistent and/or reduced. Use maximum labeled use rate allowed in the specific crop. |   |

## TIMING OF APPLICATION

This product will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into the soil within 7 days after application by rainfall, sprinkler irrigation or mechanical tillage prior to weed seedling emergence from soil. This product can also be applied through chemigation including flooded basin irrigation systems. Apply this product as pre-plant surface, pre-plant incorporated, surface incorporated, pre-emergence, early post-emergence, post-emergence incorporated (CULTI-SPRAY) or layby treatment. See the "CROPS" section for specific application directions by crop.



**Pre-plant Surface Applications:** Apply this product alone or in tank-mixtures up to 45 days before planting in minimum tillage or no-tillage production systems. When making early pre-plant surface applications (15 to 45 days prior to planting), tank-mix this product or follow by a post-emergence herbicide application. Rainfall or sprinkler irrigation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate.

**Pre-plant Incorporated Applications:** Apply this product and incorporate into the upper (1 to 2 inches) soil surface up to 60 days before planting. Use an implement capable of giving uniform incorporation. Two-pass incorporation usually results in a more consistent result.

**Surface Incorporated Applications:** Uniformly apply this product as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between tree rows. Within 7 days after application, incorporate into upper (1 to 2 inches) soil surface using either rainfall, sprinkler irrigation or shallow mechanical incorporation using an implement capable of giving uniform incorporation. Two-pass mechanical incorporation usually results in a more consistent result.

**Pre-emergence Surface Applications:** Broadcast treatment uniformly to the soil surface at planting and up to 2 days after planting. Rainfall, sprinkler irrigation or shallow mechanical incorporation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate. If adequate rainfall or irrigation does not occur and weed seedling emergence begins, a shallow cultivation or rotary hoeing will improve performance.

**Early Post-emergence Applications:** Apply this product prior to weed seedling emergence or in a tank-mix with products that control the emerged weeds. Refer to the "CROPS" section for specific post-emergence application directions by crop.

**Post-emergence Incorporated Applications (CULTI-SPRAY):** Prior to application, cultivate crops in such a manner as to throw at least 1 inch of soil over the base of the crop plants. This will prevent direct contact of this product and the zone of brace root formation. Broadcast apply this product with a ground sprayer when crop is at least 4 inches tall up to layby. Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows. Thoroughly and uniformly incorporate treatments of this product into the soil with (1) a sweep-type or rolling cultivator set to provide thorough incorporation in the top 1 inch of soil or (2) adequate overhead irrigation water or rainfall. See "CORN" and "GRAIN SORGHUM" under the "CROPS" section for more details on Culti-Spray application.

**Layby Application:** Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (layby). See the "CROPS" section for more details on layby application.

**Split Applications:** This product may be applied pre-plant incorporated up to 60 days prior to planting followed by a pre-emergence application at planting or up to 2 days after planting. The total amount of this product applied per acre per season cannot exceed the highest specified rate for any given soil type. See the "CROPS" section for more details on split applications.

**Fall Applications:** This product may be used in Fall application programs in certain crops. See the "CROPS" section for details on Fall application timing.

## APPLICATION INSTRUCTIONS

This product may be applied using either water or sprayable fluid fertilizer (such as straight 32-0-0 or 28-0-0) as the spray carrier. Additionally, this product may be impregnated on dry bulk fertilizer. Do not use sprayable fluid fertilizer as a carrier after crop emergence unless the typical fertilizer burn symptoms on the crop are acceptable.

### AERIAL APPLICATION

Uniformly apply in 5 or more gallons of water per acre.

Exercise precautions to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting.

Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.

### GROUND APPLICATION (BROADCAST)

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre or 20 or more gallons of liquid fertilizer per acre. Use sprayers equipped with appropriate nozzles that provide uniform and accurate spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle and in-line screens must be no finer than 50 mesh. Application of this product during periods of gusty winds may result in uneven applications. Do not apply this product post-emergence in liquid fertilizers.

If liquid fertilizer/herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result. Always predetermine the compatibility of this product alone or with other herbicides based on the following compatibility jar test.

1. Add 1 pint of fertilizer to a quart jar.
2. Add 1 to 4 teaspoons of the Dry Flowable (DF), Wettable Powder (WP), Aqueous Solution (SL), Flowable (SC) or Liquid (L) formulation (depending on mixing ratio required) to the liquid fertilizer. The number of teaspoons of the formulation to add can be determined by the following formula:

$$\frac{\text{Lbs. or Pts. of the Product/Acre}}{\text{Gals. of Fertilizer/Acre}} \times 11.4 = \text{No. of Teaspoons of Herbicide to Add to 1 Pint of Fertilizer}$$

3. Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
4. After dispersing the materials, add appropriate number of teaspoons of this product to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes and then observe the results. Look for signs of separation: an oily layer or globules, sludge, flakes or other precipitates.
5. Evaluate compatibility.
  - (a) If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
  - (b) If the mixture separates but mixes readily with shaking, the mixture can be used provided that good agitation is maintained in the spray tank.
  - (c) If separation of the mixture occurs and agitation does not correct this problem, a compatibility agent is needed.
6. If the need for a compatibility agent is demonstrated, the following procedure is recommended: Using a clean quart jar, repeat step 1 above and add one-half teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3 and 4. If separation or precipitation occurs with the compatibility agent, do not use this product with that specific liquid fertilizer.

### GROUND APPLICATION (BAND)

Uniformly apply the broadcast equivalent rate and volume per acre. To determine these:

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Rate per Acre} = \text{Band Rate per Acre}$$

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Volume per Acre} = \text{Band Volume per Acre}$$

### GROUND APPLICATION (DRY BULK FERTILIZER)

Apply this product/dry bulk fertilizer mixtures with ground equipment only. **Do not** impregnate this product onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with this product. A minimum of 200 pounds of impregnated dry bulk fertilizer excluding the weight of ammonium nitrate or limestone must be applied per acre.

Use the following formula to determine the amount of this product (in quarts) to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

$$\frac{2000}{\text{Lbs. of Dry Fertilizer}} \times \text{Quarts of This Product (Specified Rate per Acre)} = \text{Quarts of This Product per Ton of Fertilizer}$$

To impregnate this product on bulk fertilizer, use a closed rotary drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of this product onto the fertilizer during mixing.

Apply this product/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. This product/dry bulk fertilizer mixture must be spread uniformly on the soil surface.

### CHEMIGATION APPLICATION (VIA SPRINKLER IRRIGATION SYSTEMS)

This product may be applied as a chemigation treatment through sprinkler irrigation systems. Refer to "CROPS" section for individual crops.

Do not apply this product via chemigation to crops unless specified in the "CROPS" section.

Apply this product ONLY through a sprinkler irrigation system of the following type: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move. Do not apply this product through any other type of sprinkler irrigation system.

Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness or illegal pesticide residues in the crop. If you have any questions about calibration, contact your state extension service specialists, equipment manufacturers or other experts.

The system must be properly calibrated (with water only) to ensure that the amount of this product applied corresponds to the specified rate. Apply this product in one-half to three-fourths inches of water during the first sprinkler set (use at least 1 inch of water in the states of New Mexico, Oklahoma and Texas). Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.

### Instructions for Low Volume Micro Sprinklers

Output of low volume sprinkler equals 4 to 50 gallons per hour (gph) per emitter. Point of application must be above ground. Irrigation system should run a sufficient amount of time prior to injection of this product to have all emitters functioning properly. After system is operating properly, length of injection should be such that at one period of time during the injection, the first and last emitters in the system contain water treated with this product. Add this product to the supply tank already filled with the volume of water required for the injection period. Maintain proper agitation in the injection tank containing this product. Mix this product in clean water and inject down-line from filters. Following injection of this product, flush the system for a period of time sufficient to clear the line of this product. (If application of this product is made during a normal irrigation cycle, make the injection during the last stage.)

### Calibration of Low Volume Micro Sprinklers

Calculation of use rate is based on wetted area around emitters, **not** on tree acres. To determine the correct amount of this product, use the following formula:

1. Treated area per each emitter = A

$$A = 3.14 \times (\text{radius} \times \text{radius})$$

2. The area in square feet wet in each acre = B

$$B = \frac{A \times \text{Emitters/Acre}}{144}$$

3. The total area (sq. ft.) wet by your system = C

$$C = B \times \text{Acres covered by system}$$

4. Rate per treated acre of this product (based on length of control desired) = R

$$\text{Amount of This Product to Inject (S)} = \frac{C}{43,560} \times R = \text{Quarts of This Product}$$

#### Example:

If the average distance from emitter to perimeter of wetted area measured 1 inch below soil surface is 13 inches, then:

$$A = 3.14 \times (13'' \times 13'') \text{ and } A = 530.7 \text{ sq. in.}$$

If there are 300 emitters per acre, then:

$$B = \frac{530.7 \times 300}{144} \text{ and } B = 1105.6 \text{ sq. ft. wetted per acre}$$

If the system covers 20 acres, then:

$$C = 1105.6 \text{ sq. ft.} \times 20 \text{ acres and } C = 22,112 \text{ sq. ft. wetted by the system}$$

If the desired application rate per treated acre is 2.4 quarts of this product, then:

$$S = \frac{22,112}{43,560} \times 2.4 \text{ and } S = 1.2 \text{ quarts of this product}$$

have to be injected into the system

### Special Restrictions For Chemigation

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
3. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
4. The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. It must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. In addition, systems



- must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
6. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
  7. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

### **Chemigation Systems Connected to Public Water Systems**

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section "*Special Restrictions for Chemigation*".

### **CHEMIGATION APPLICATION (VIA FLOODED BASIN IRRIGATION SYSTEMS)**

This product may be applied via flooded basin irrigation systems, but only to the following crops: Bearing and Nonbearing Fruit and Nut trees and Nonbearing vineyards.

### **Use Instructions and Restrictions for Flooded Basin Irrigation**

1. This product may be applied through flooded basin irrigation systems designed to uniformly distribute irrigation water along the soil surface. Solid set systems utilizing tall riser for overhead application are excluded.
2. Follow all label directions for this product regarding rates per acre, timing of application and crop specific use restrictions.
3. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
4. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.
5. Mix this product with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.
6. Recirculate tail water (runoff water) from flood irrigation that contains this product and contain in the field of initial application or use only on adjacent tree or vine crops for which this product is registered for this type of application.
7. Systems using a gravity-flow pesticide dispensing system must meter the pesticide in the water at the head of the field downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow water.
8. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - The system must contain a functional check valve, vacuum-relief valve and low-pressure drain appropriately located in the irrigation pipe to prevent water source contamination from backflow.
  - The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent flow of fluids back towards the injection pump.
  - The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - The system must contain a functional interlocking control to automatically shut off the pesticide injection pump when the water pump stops.
  - The irrigation pipe or water pump must include a functional pressure switch, which will stop the pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  - Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) of effective design and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
  - Any alternative to the above safety devices must conform to the list of EPA-approved alternative devices.
9. Be sure to regularly measure the flow in the field to ensure the correct amount of this product is being metered into the irrigation water and also regularly monitor to ensure that treated water is being uniformly distributed across the field. Flow rates through metering devices and distribution of this product can vary with water temperature and speed of water flow across the field.
10. Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.
11. If you have questions about calibration, contact your state extension service specialists, equipment manufacturers or other experts.



## SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator and grower are responsible for considering all these factors when making decisions. It is the responsibility of the applicator to avoid spray drift onto non-target areas.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

1. The distance of the outermost nozzles on the boom must not exceed three-fourths the length of the wingspan or rotor.
  2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the following spray drift reduction advisory information.

### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see *"Wind"*, *"Temperature and Humidity"* and *"Temperature Inversions"*).

### Controlling Droplet Size

**Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure** - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** - Orienting nozzles so that the spray released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

**Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles. Solid or straight-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### Boom Length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

### Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### Swath Adjustment

When applications are made with crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

### Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### Sensitive Areas

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species or non-target crops or plants) is minimal (e.g., when wind is blowing away from the sensitive areas).

### ADDITIVES

Spray adjuvants have little or no influence on performance of this product when applications are made prior to weed emergence. However, several tank-mixes with this product require adjuvants to improve burndown of emerged weeds. Therefore, surfactants, liquid fertilizer (28%, 30% or 32% UAN (urea ammonium nitrate) or ammonium sulfate) or crop oil concentrate may be used with this product tank mixed applied pre-plant, pre-emergence or early post-emergence to the crop. Follow the adjuvant directions for use on the label of the tank-mix partner.

### TANK-MIXING INFORMATION

This product may be applied in a tank-mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to this product.

When using tank-mixtures or sequential applications with this product, always read the companion product label(s) to determine the specific use rate by soil types, weed species and weed or crop growth stage. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

### Tank-Mixture With Other Product(s)

If compatibility with tank-mix partner is not known, perform a mixing test to check the compatibility of this product with the tank-mix partners.

### Mixing Instructions

1. Fill tank one-half to three-fourths full with clean or liquid fertilizer and agitate. Prior to mixing this product or tank-mixtures of this product in liquid fertilizer, refer to appropriate label sections for use in liquid fertilizer, application instructions and compatibility determinations.  
**Note:** This product will not mix in high salt formulation fertilizers such as 10-34-0. When utilizing high salt formulation fertilizers as the spray carrier, use one of the following:
  - a) Pre-slurry this product in water prior to adding to the tank. Use 1:1 ratio of water to this product.
  - b) Add water to fertilizer solution prior to adding this product. The amount of water should be equal or greater than the amount of this product to be used.
2. This Product Alone  
When using this product alone, add this product to partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.
3. This Product in Tank-Mixture  
Add the tank-mixture products in the order listed below prior to adding this product. For tank-mixtures with 2,4-DB, paraquat or glyphosate, see mixing instructions at the end of this section.
  - a) Wettable Powder (WP) formulations - Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
  - b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations - Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
  - c) Flowable (SC) formulations: Add the SC formulation to the partially filled tank while agitating.
  - d) Water Soluble Concentrate (WSC) formulations: Add the WSC formulation to the partially filled tank while agitating.
  - e) Emulsifiable Concentrate (EC) formulations: Add the EC formulation to the partially filled tank while agitating.

After complete mixing, add this product to the tank.

- f) **Note:** For tank-mixes including 2,4-DB, paraquat or glyphosate: After complete mixing of this product, continue filling the sprayer with water and add 2,4-DB or paraquat or glyphosate near the end of the filling process.  
If paraquat is included in the tank-mixture, add 8 fluid ounces of nonionic surfactant per 100 gallons of total spray mixture as the last ingredient in the tank.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

- 4. Thorough and continuous sprayer-tank agitation must be maintained during mixing and spraying of this product. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to re-suspend the mixture before spraying is resumed.

Continue agitation while spraying.

## CLEANING SPRAY EQUIPMENT

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacturer's directions and then triple rinsing the equipment before and after applying this product.

## USE RESTRICTIONS

- Do not exceed the maximum labeled rate for any soil type.
- In the event of a crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted the same year without adverse effects (see "CROPS" section for exceptions). If replanting is necessary, do not work the soil deeper than the treated zone.
- Refer to the "CROPS" section for crop specific pre-harvest intervals (PHI) and feeding and grazing restrictions.

## CROP ROTATION

- Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations. However, various environmental and agronomic factors such as arid conditions make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Soil characteristics and environmental conditions which may contribute to crop stress that may be accentuated by the use of this product include: coarse soils, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought and heavy rainfall soon after application.
- When this product is used in tank-mix or sequential combinations, refer to label(s) of other herbicide(s) for additional rotational crop restrictions.
- Restrictions for rotational cropping after the use of this product are dependent on the application use rate of this product in the primary crop. Read the following restrictions to determine the rotational crops for their specific situation according to application use rate.

## CROP ROTATION RESTRICTIONS AND LIMITATIONS

### Rotational Crop Restrictions Following Applications of This Product to Field and Row Crops

#### 1. Application Rate $\leq$ 2.4 Quarts ( $\leq$ 2 lbs. a.i.) per Acre

##### a) Crops which are labeled for pre-plant incorporated application:

These crops may be planted the same season in which this product was applied.

##### b) Sugar beets, Red beets and Spinach:

To avoid crop injury, do not plant Sugar beets, Red beets or Spinach for 12 months following a Spring application of this product or 14 months following a Fall application of this product.

Do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a crop.

To ensure thorough mixing of soil prior to planting Sugar beets, Red beets and Spinach, plow the land using a moldboard plow to a depth of 12 inches.

##### c) Proso millet, Sorghum (Milo) and Annual or Perennial grass crops or Mixtures:

Do not plant Proso millet, Sorghum (Milo) and Annual or Perennial grass crops or mixtures for 10 months after a Spring application of this product or 12 months after a Fall application of this product except in the following conditions:

- In the states of Minnesota, North Dakota and South Dakota: Do not plant these crops for 18 months following a Spring application of this product or 21 months following a Fall application of this product.
- To avoid the possibility of crop injury in areas that receive less than 20 inches of rainfall or irrigation to produce a crop, do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a field or row crop.

##### d) Wheat and Barley:

Wheat and Barley may be planted 4 months after an application of this product except under the following conditions:

- If less than 12 inches of rainfall or overhead irrigation was received between application and rotational crop planting, do not plant Wheat before 12 months after a Spring application of this product or 14 months after a Fall application of this product.

- In dryland areas and/or areas where irrigation is necessary to produce the crop treated with this product, do not plant Winter wheat or Barley as a follow crop if crop failure/destruction occurs and land is fallowed during the Summer.

**e) All Other Rotational Crops Not Specifically Addressed Above:**

Crops other than those to which this product may be applied as a pre-plant incorporated treatment may be planted the year following application of this product except under the following condition:

- If rainfall or irrigation was not sufficient to produce a crop, delay planting for 18 months following a Spring application of this product or 20 months following a Fall application of this product.

**2. Application Rate > 2.4 Quarts (> 2 lbs. a.i.) per Acre**

In the growing season following application of this product to field and row crops at greater than 2.4 quarts per acre, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur. Do not plant other crops for 24 months.

**Rotational Crop Restrictions Following Applications of This Product to Grove, Orchard and Vineyard Crops**

In the growing season following application of this product to bearing Fruit and Nut trees, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur. Do not rotate to other crops (except for Fruit trees, Grapes or Nut crops) for 24 months following an application of this product to bearing Fruit or Nut trees.

**USE AREA**



**CROPS**

**Disclaimer:** The use of this product may result in crop injury, loss or damage including but not limited to agronomic, cultural, mechanical and environmental. Numerous risks of loss or damage to certain crops may be associated with the use of this product even when directions for use are completely followed. The user or grower should take all such risks into consideration before deciding to apply the product.

Drexel recommends testing on a small portion of the target crop to determine if damage is likely to occur. Each grower who is considering the product for such use should test this product in order to determine its suitability. A grower should only use this product to the extent that in his sole opinion, the benefit of use of this product outweighs the potential injury to the grower's crop.

In addition, many factors can affect crop growth and/or yield including but not limited to insects, diseases, weed competition, poor seed quality, improper planting depth, mechanical cultivation, poor weather (such as freezing or excessive wind, rain heat or cold), lack of excessive moisture, crusting, fertility or hardpans. Risk of loss or damage to crops may be associated with the use of this product and contribute to poor stands due to failure of crop to emerge, swelling of roots or other below ground plant parts, less vigorous plant growth and development and reduction in yield potential.

**BEARING FRUIT AND NUT TREES**

This product may be applied in the following individual crops within the Fruit tree and Tree nut crop groupings:

| CITRUS FRUIT CROP GROUPING |                      |                      |
|----------------------------|----------------------|----------------------|
| Calamondin                 | Kumquat              | Orange (Sour, Sweet) |
| Citrus citron              | Lemon                | Pummelo              |
| Citrus hybrids             | Lime                 | Satsuma mandarin     |
| Grapefruit                 | Mandarin (Tangerine) | Tangelo              |



| POME FRUITS CROP GROUPING     |                                   |        |
|-------------------------------|-----------------------------------|--------|
| Apples<br>Crabapple<br>Loquat | Mayhaw<br>Pear<br>Pear (Oriental) | Quince |

| STONE FRUITS CROP GROUPING                               |   |                 |
|--|---|-----------------|
| Apricot<br>Aprium<br>Cherries (Sweet, Tart)<br>Nectarine | Peach<br>Plum<br>Plum (Chickasaw, Damson,<br>Japanese)<br>Plumcot | Pluot<br>Prunes |

| OTHER FRUIT TREES |           |
|-------------------|-----------|
| Pomegranate       | Juneberry |

| TREE NUTS CROP GROUPING                                  |  |                              |
|--|--|------------------------------|
| Almond<br>Beech nut<br>Brazil nut<br>Butternut<br>Cashew | Chestnut<br>Chinquapin<br>Filbert (Hazelnut)<br>Hickory nut<br>Macadamia nut | Pecan<br>Pistachio<br>Walnut |

### Methods of Application, Timing and Rates

- Apply this product by ground, chemigation or flooded basin irrigation systems.
- Apply this product either in a single application or sequentially with an interval of 30 days or more.
- Apply this product at the rate of 2.4 to 4.8 quarts per acre depending on desired length of control (see below table) per application.

### Use Rates:

|                    |                   |
|--------------------|-------------------|
| Short-term control | 2.4 qts. per acre |
| Long-term control  | 4.8 qts. per acre |

**Ground Applications:** This product may be applied surface-incorporated or surface pre-emergence.

Apply this product as a broadcast or banded treatment using ground equipment before weed emergence. Apply the spray directly to the ground beneath the trees and/or in areas between rows. Do not apply over the top of trees with leaves or buds or fruit. Contact by the spray mixture with leaves, shoots, or buds may cause injury.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the "APPLICATION INSTRUCTIONS" section. Do not apply irrigation water treated with this product over top of trees with leaves or buds or fruits. Contact with leaves, shoots or buds by spray mixture may cause injury.

**Flooded Basin Irrigation Systems:** This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flood basin found in the "APPLICATION INSTRUCTIONS" section.

### Use Restrictions on Bearing Fruit and Nut Trees

- Do not apply by air.
- Do not apply to newly seeded nursery stock.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.2 quarts of this product per acre per year in Citrus and Nut trees.
- Pre-harvest Interval (PHI): Do not apply within 1 day of harvest of Citrus fruit.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest of Pome and Stone fruits or other Tree fruits.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest of nuts except Almonds.
- Pre-harvest Interval (PHI): Do not apply within 120 days of harvest of Almonds.
- Do not feed forage or graze livestock in treated groves or orchards.

## CARROTS

### Methods of Application, Timing and Rates

Apply this product by ground, air or chemigation.

**Pre-emergence Applications:** Make a single broadcast application by ground or air or by chemigation using 1.2 quarts of this product per acre as a post-plant treatment prior to emergence of the crop and before weed emergence. Apply a pre-emergence treatment within 2 days after planting.

**Layby:** This product may be applied only by ground equipment at layby (last mechanical cultivation) at 1 quart per acre as a directed spray to the soil between rows. Apply this product prior to weed emergence. Emerged weeds will not be controlled by this treatment. Do not allow the spray to contact Carrot plants or injury may occur. Do not apply layby applications by chemigation or by air.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the "APPLICATION INSTRUCTIONS" section. Do not allow irrigation water treated with this product to contact Carrot plants. Do not apply tank-mixtures through any type of irrigation system unless the label instructions on chemigation of all products are followed.

### Use Restrictions on Carrots

- Do not apply more than 1.2 quarts of this product per acre per season.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply layby applications by chemigation or by air.

## CARROTS GROWN FOR SEED PRODUCTION

### Methods of Application, Timing and Rates

Apply this product only by layby.

**Last Cultivation (Layby):** Apply this product following the last mechanical cultivation (layby) at the rate of 0.6 to 2.4 quarts of this product per acre (on a broadcast basis). Uniformly apply as directed spray to the soil between rows. Do not allow the spray to contact Carrot plants or injury may occur. Use protective shields to avoid contact with Carrot foliage. Use properly calibrated and accurate nozzles and equipment. Layby applications can be applied to Carrots previously treated with herbicide(s) registered in/on Carrots. Consult the label(s) of the herbicide(s) for directions for use, rates to be used and precautions or restrictions for use in Carrots and for rotational crops.

### Use Restrictions on Carrots Grown For Seed Production

- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply layby applications by chemigation or by air.
- Pre-harvest Interval (PHI): Do not apply within 60 days of Carrot seed harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not harvest Carrots for food or feed use.

### Special Use Restrictions on Carrots Grown For Seed Production

The pesticide applicator, the producer of the crop and the seed conditioner must be aware that use of this product according to this labeling is deemed a non-feed/non-food use. If the applicator of this pesticide is not the producer, the applicator should provide a copy of this labeling to the producer of the crop. Producers of this crop who use this product or cause the product to be used on a field they operate, should provide a copy of this pesticide label to the seed conditioner. Consequently, no portion of this Carrot seed crop, including but not limited to green chop, hay, pellets, meal, whole seed, cracked seed, roots, bulbs, foliage and seed screenings, may be used or distributed for food or feed purposes. Processed Carrot seed from a field treated with this product must bear a specific tag or conspicuous container labeling or if shipped in bulk, on the shipment invoice or bill of lading, with the following statement: "Not for human consumption or animal feed." All seed screenings from seed processing shall be disposed of in such a manner that the screenings cannot be distributed or used for human food or animal feed purposes. The seed conditioner shall keep records of screening disposal for 3 years from the date of disposal and shall furnish the records immediately upon request. Conditioner disposal records shall consist of documentation of on-farm disposal, disposal at a controlled dumpsite, incinerator, composter or other equivalent disposal site and shall include the lot numbers, amount of material disposed of, the grower(s) and the date of disposal.

## CORN (Field, Pop, Seed, Sweet)

### Additional Weeds Controlled

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Corn with CULTI-SPRAY application: Wild proso millet and Shattercane.

### Methods of Application, Timing and Rates

- Apply this product ground, air or chemigation.
- Apply this product in conventional, minimum or no-till as a pre-emergence, post-emergence or post-emergence incorporated (CULTI-SPRAY) application in Field corn.
- Apply this product in conventional tillage as a pre-emergence or post-emergence application in Pop corn, Seed corn or Sweet corn.

**Note: Regardless of tillage system, plant Corn at least 1.5 inches deep and completely cover with soil.**

In conventional tillage systems, plant into a seedbed that is firm and free of clods and trash. Use only where adequate tillage is practiced to provide good soil coverage of the Corn seed.

In no-till systems, utilize a no-till planter that is capable of planting through crop residue. The use of no-till planters under conditions that do not allow good soil coverage of the Corn seed can result in reduced crop stand or injury if this product contacts the germinating Corn seed. Check equipment to ensure good seed coverage.

Treatments of this product alone or this product in tank-mix combination(s) are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. If cultivation is necessary because of soil crusting or weed germination, use shallow tillage and make certain that Corn seeds are below the tilled area.

**Pre-emergence:** Apply this product after planting but before weeds and crop emerge.

**Post-emergence:** Apply this product post-emergence until Field corn is 30 inches tall (20 to 24 inches tall for Pop, Seed and Sweet corn) or in the V8 growth stage, whichever is more restrictive. If the Corn canopy prevents applications from reaching the soil, use drop nozzles and apply as directed spray.

**Culti-Spray:** Apply this product alone or this product plus atrazine when Field corn is at least 4 inches tall until last cultivation (layby). This product plus atrazine must be applied before Field corn reach 12 inches in height. Observe the maximum allowable rates for atrazine on the atrazine label.

Under situations of low rainfall or soil moisture when deep germinating weeds such as Shattercane or Field sandbur are anticipated, mechanical incorporation will provide best results. If cultivation is needed after application and incorporation of this product, the depth of cut should be no deeper than the depth of cut used to incorporate.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the "APPLICATION INSTRUCTIONS" section.

### Use Rates:

| Pre-Emergence or Post-Emergence Applications |                       |                          |                     |
|--|-----------------------|--------------------------|---------------------|
| Soil Texture                                 | Organic Matter        |                          |                     |
|  | < 1.5%<br>(Qts./Acre) | 1.5 to 3%<br>(Qts./Acre) | > 3%<br>(Qts./Acre) |
| Coarse                                       | 0.9 to 1.2            | 1.2 to 1.8               | 1.8                 |
| Medium                                       | 1.2 to 1.8            | 1.8                      | 1.8 to 2.4          |
| Fine   | 1.2 to 1.8            | 1.8 to 2.4               | 1.8 to 2.4          |

| Culti-Spray Applications - Field Corn Only |                                 |                                 |
|--|---------------------------------|---------------------------------|
| Soil Texture                               | Southern States*<br>(Qts./Acre) | Northern States*<br>(Qts./Acre) |
| Coarse                                     | 0.6 to 0.9                      | 0.9 to 1.2                      |
| Medium                                     | 0.9 to 1.2                      | 1.2 to 1.8                      |
| Fine                                       | 0.9 to 1.8                      | 1.2 to 1.8                      |

\*See map for specific States in the "USE AREA" section.

### Use Restrictions on Corn

- Do not apply this product in reduced, minimum or no-till Sweet corn, Seed corn or Popcorn.
- Do not apply this product in no-till in California.
- Do not apply this product pre-plant incorporated.
- Do not apply this product post-emergence in liquid fertilizer.

- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Corn after 21 days following application

## COTTON

### Additional Weeds Suppressed

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will suppress Russian thistle in the state of Arizona.

### Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation in conventional, minimum, stale seedbed or no-till.
- Apply this product as a pre-plant surface, pre-plant incorporated, pre-emergence or layby application in Cotton. Pre-plant surface, pre-emergence and layby treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. A shallow cultivation is recommended if soil crusting or soil compaction occurs. If weeds begin to germinate or adequate moisture is not received within 7 days after application, use shallow tillage (rotary hoe or light harrow) and make sure Cotton seeds are below tilled area. The use of a post-emergence herbicide treatment may be required to control weed escapes at planting or following Cotton emergence.

**Pre-plant Surface:** Apply this product up to 15 days prior to planting. Apply tank-mixes of this product and sequential programs as specified under the "TANK-MIXING INFORMATION" section.

**Pre-plant Incorporated:** Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Apply tank-mixes of this product and sequential programs as specified under the "TANK-MIXING INFORMATION" section.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply tank-mixes of this product and sequential programs as specified under the "TANK-MIXING INFORMATION" section.

**Pre-plant Incorporated Followed by Pre-emergence Applications:** Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Make overlay application of this product at planting or up to 2 days after planting. Total amount of this product applied per acre cannot exceed the highest labeled rate for a given soil type. Pre-plant incorporated and pre-emergence applications of this product may be applied with the labeled tank-mix herbicide(s).

**Layby Application (At last cultivation):** Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (layby). Layby applications can be applied in Cotton previously treated with this product or any herbicide(s) registered for use in Cotton. Consult the labels of those herbicide(s) for use directions, rates to be used, precautions or restrictions for use in Cotton and restrictions for rotational crops. The total amount of this product applied per acre per season cannot exceed the highest labeled rate for a given soil type.

Do not apply as a broadcast spray over the top of Cotton or serious crop injury can result. Avoid contact of spray to the non-woody portion of Cotton stems and to Cotton foliage or serious crop injury can result. To reduce the potential for crop injury caused by herbicide contact with Cotton foliage and stems, use protective shields when conditions favor spray drift.

Glyphosate-containing products may be applied with this product at layby in Cotton with the glyphosate tolerant gene. DO NOT apply glyphosate-containing products at layby on non-glyphosate tolerant Cotton. Do not apply this product and glyphosate tank-mix as a broadcast spray over the top of Cotton or crop injury may result.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**Fall Application:** This product may be applied to control weeds in Cotton in the Fall after October 15 (up to 140 days prior to planting Cotton) in Arizona, California, Louisiana, Mississippi, New Mexico, Oklahoma and Texas. Apply this product at the broadcast rate of 1.2 quarts per acre on coarse or medium soils and 1.8 quarts per acre on fine soils.

### Use Rates:

| Soil Texture  | Conventional or Minimal Tillage<br>(Qts./Acre) | No-Till**<br>(Qts./Acre) |
|---|--|--------------------------|
| Coarse  | 0.6 to 1.2*                                    | 0.9 to 1.2               |
| Medium  | 0.9 to 1.2                                     | 1.2 to 1.8               |
| Fine  | 1.2 to 1.8                                     | 1.8 to 2.4               |
| *Do not exceed 0.9 quart per acre on coarse textured soils in California. |  |                          |
| **Not for use on soils with more than 3% organic matter.                  |  |                          |



### Use Restrictions on Cotton

- Do not apply this product in no-till in California.
- Pre-harvest interval (PHI) is 60 days between last application of this product and Cotton harvest.
- Do not exceed the highest seasonal rate of this product per acre for any given soil type as specified in the "Use Rates" table.
- Do not feed forage or graze livestock in treated Cotton fields.

### EDIBLE BEANS [Chickpeas (Garbanzo Beans), Dry, Lima, Snap, Southern Peas (Cowpeas) and Sweet Lupine]

#### Methods of Application, Timing and Rates

- Apply this product in the Fall pre-plant surface or pre-plant incorporated in Chickpeas (Garbanzo beans), Dry beans, Lima beans, Snap beans and Southern peas (Cowpeas)
- Apply this product in the Fall pre-plant surface or pre-plant incorporated or pre-emergence in Sweet lupines.

**Pre-plant Incorporated:** Apply up to 60 days prior to planting and incorporate within 7 days of application.

**Pre-emergence:** Apply only to Sweet lupines at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods.

#### Use Rates:

| Soil Texture | Southern States*<br>(Qts./Acre) | Northern States*                   |                                    |
|--------------|---------------------------------|------------------------------------|------------------------------------|
|              |                                 | ≤ 3% Organic Matter<br>(Qts./Acre) | > 3% Organic Matter<br>(Qts./Acre) |
| Coarse       | 0.9                             | 1.2                                | 1.2                                |
| Medium       | 1.2                             | 1.5                                | 1.8                                |
| Fine         | 1.8                             | 1.8                                | 1.8                                |

\*See map for specific States in the "USE AREA" section.

**Fall Applications:** Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Edible beans [Chickpeas (Garbanzo beans)], Dry beans (including Black turtle, Cranberry, Great northern, Navy, Red kidney and Small white type), Lima beans, Snap beans, Southern peas (Cowpeas) and Sweet lupines the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes.

DO NOT apply when air temperature is below 45°F.

**Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)**

#### Use Rates:

| Soil Texture | Broadcast Rate<br>(Qts./Acre) |                     |
|--------------|-------------------------------|---------------------|
|              | ≤ 3% Organic Matter           | > 3% Organic Matter |
| Coarse       | 0.6 to 1.2                    | 1.2                 |
| Medium       | 0.9 to 1.5                    | 1.5 to 1.8          |
| Fine         | 1.2 to 1.8                    | 1.8                 |

### Use Restrictions on Edible Beans

- Do not apply this product more than once per cropping season.
- Do not apply in any type of irrigation system.
- Do not feed Lupine hay and forage or graze livestock in treated Lupine fields.

### FORAGE LEGUMES (Except Alfalfa)

This product may be used in Forage legumes used as a cover crop in the Federal set-aside or Conservation Reserve Program (CRP) areas.

Some stand reduction of the Legume cover crops may occur with this use. Consult local county extension service or the local ASC committee for recommended cover crops.

If loss of cover crop occurs due to adverse weather conditions, any crop registered for pre-plant incorporated use of this product can be replanted the same year into the soil treated with this product without adverse effects. If replanting is necessary, do not rework the soil deeper than the zone treated with this product. Do not feed or graze legume cover crops established following application of this product.

Destroy ultimately the cover crop residue by tillage or by leaving on the surface to retard erosion or as directed by the local ASC committee.

### Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or pre-emergence for weed control in Legume cover crops.

#### Use Rates:

| Pre-Plant Incorporated or Pre-Emergence |                            |
|---|----------------------------|
| Soil Texture                            | Broadcast Rate (Qts./Acre) |
| Coarse                                  | 0.6 to 0.9                 |
| Medium                                  | 0.9 to 1.2                 |
| Fine                                    | 1.2 to 1.5                 |

### FRUITING VEGETABLES

This product may be applied to the following fruiting vegetables: Eggplant, Groundcherry (*Physalis* spp.), Pepper (includes Bell, Chili, Cooking, Pimento, Sweet), Pepino, Tomatillo, Tomato

### Methods of Application, Timing and Rates

- Apply this product uniformly by ground or air only.
- Apply this product as a broadcast pre-plant incorporated or as a broadcast pre-plant surface prior to transplanting fruiting vegetables or as a post-directed application to transplanted or established direct-seeded fruiting vegetables.

Do not apply prior to direct-seeded fruiting vegetables. Do not apply post-emergence over the top of or to foliage of fruiting vegetables as severe injury may occur.

This product can be applied as a post-directed spray on the soil at the base of the plant, beneath the plants and between rows. Avoid direct contact with foliage or stems. Be sure roots of transplants are established. Following the post-directed spray and when sufficient rainfall or irrigation does not occur to activate the herbicide, mechanically incorporate at the time of blocking and thinning or at "layby." Apply this product prior to weed emergence. Emerged weed will not be controlled by this treatment.

#### Use Rates:

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.6 to 0.9                 |
| Medium       | 0.9 to 1.2                 |
| Fine         | 0.9 to 1.8                 |

### Use Restrictions on Fruiting Vegetables

- Do not apply more than 1.8 quarts of this product per acre per season.
- Pre-harvest Interval (PHI): Do not apply within 70 days of harvest.
- Do not allow the soil treated with this product to come in contact with transplant area.
- Do not apply if row is to be covered later with plastic.

### GARLIC

#### Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

**Pre-emergence:** Apply after planting but before crop and weeds emerge.

**Post-emergence:** Apply at the 1st to 5th true-leaf growth stage.

**Split Applications:** Apply at both pre-emergence and post-emergence timings.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage in California). Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**Use Rates:**

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2                        |
| Fine         | 1.8                        |

**Use Restrictions on Garlic**

- Do not exceed 1.8 quarts of this product per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts of this product per acre per crop for Dodder control.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.

**GRAIN SORGHUM****Additional Weeds Controlled**

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Grain sorghum as a CULTI-SPRAY application: Wild proso millet and Shattercane.

**Methods of Application, Timing and Rates**

- Apply this product uniformly in water by ground equipment or by aircraft.
- Apply this product as a post-emergence incorporated (CULTI-SPRAY) in Grain sorghum in all states.
- Apply this product early post-emergence in Grain sorghum grown in states east of the Mississippi River and in Arkansas, Eastern Texas, Louisiana and the Missouri "bootheel".

**Culti-Spray:** Treatments of this product can be applied from the 4-inch growth stage to as late as the last cultivation (layby) of Grain sorghum. See specific directions for CULTI-SPRAY application under the "TIMING OF APPLICATION" section.

**Early Post-emergence:** For use only in states east of the Mississippi River plus Arkansas, eastern Texas, Louisiana and the "bootheel" of Missouri. The seedbed should be firm and free of clods and trash. Use only where adequate tillage is practiced to provide good seed coverage. Plant Grain sorghum at least 1.5 inches deep to ensure good seed coverage.

**Use Rates:**

| Culti-Spray Application |                                 |                                 |
|-------------------------|---------------------------------|---------------------------------|
| Soil Texture            | Southern States*<br>(Qts./Acre) | Northern States*<br>(Qts./Acre) |
| Coarse                  | 0.9                             | 1.2                             |
| Medium                  | 1.2                             | 1.8                             |
| Fine                    | 1.8                             | 1.8                             |

\*See map for specific States in the "USE AREA" section.

| Early Post-Emergence Application |                          |
|----------------------------------|--------------------------|
| Soil Texture                     | This Product (Qts./Acre) |
| Coarse                           | DO NOT USE               |
| Medium, Fine                     | 1.2                      |

**Use Restrictions on Grain Sorghum**

- Do not apply this product pre-plant incorporated or pre-emergence as serious crop injury can result.
- Do not apply this product in Grain sorghum more than once per crop season.
- Do not apply this product as a CULTI-SPRAY treatment in Grain sorghum planted in double row beds.
- Do not replant Grain sorghum if crop loss occurs.
- Do not apply in liquid fertilizer.
- Livestock can graze or be fed forage from Grain sorghum fields treated by this product after 21 days following application.

**GREEN ONIONS (Green Eschalots or Green Shallots, Japanese Bunching Onions, Leeks, Scallions or Spring Onions)****Methods of Application, Timing and Rates**

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

**Pre-emergence or Post-emergence:** Uniformly apply 1.2 quarts of this product per acre as a broadcast spray to the soil surface as pre-emergence spray or as a post-emergence spray to the crop at the 2 to 3 true-leaf stage at least 30 days before harvest.

If this product is to be applied sequentially both as a pre-emergence and post-emergence spray, the pre-emergence spray must be applied 30 days prior to the post-emergence spray.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply at 2 to 3 true-leaf stage at least 30 days before harvest. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

#### Use Restrictions on Green Onions

- Do not apply more than 1.2 quarts of this product per acre per application.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Pre-harvest Interval (PHI): Do not apply within 30 days of harvest.
- Do not feed forage or graze livestock in treated fields.

### LENTILS AND PEAS (Dry, Dwarf, Edible Pod, English, Garden, Green, Pigeon) (Except CA)

#### Methods of Application, Timing and Rates

Apply this product pre-plant surface or pre-plant incorporated in Lentils and Peas.

**Pre-plant Incorporated:** Apply this product 60 days prior to planting up to immediately before planting. After application, rotary hoeing and shallow cultivation/tillage can be practiced without reducing weed control. Avoid tillage that will bring untreated soil to the surface.

**Note:** Any crop registered for a pre-plant incorporated application of this product can be double-cropped after Peas.

#### Use Rates:

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2                        |
| Fine         | 1.8                        |

**Fall Applications:** Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Lentils or Peas (Dry, Dwarf, Edible pod, English, Garden, Green, Pigeon) the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes.

DO NOT apply when air temperature is below 45°F.

#### Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)

#### Use Rates:

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.6 to 0.9                 |
| Medium       | 0.9 to 1.2                 |
| Fine         | 1.2 to 1.8                 |

#### Use Restrictions on Lentils and Peas

- Do not use in California.
- Do not use this product pre-emergence in Peas.
- Do not apply this product more than once per cropping season.
- Do not apply to Lentils, Peas, Lentil or Pea forage, Pea silage, Pea hay or Pea straw grown for livestock feed.
- Do not apply in any type of irrigation system.



## MINT (Peppermint, Spearmint)

### Methods of Application, Timing and Rates

- Apply this product by ground or air.
- Apply this product pre-emergence.

**Pre-emergence:** Make a single broadcast pre-emergence application of this product to Mint using 0.9 to 2.4 quarts of this product per acre depending on soil texture (see table below) to dormant established Mint before weed emergence. After application of this product, some temporary crop injury may be observed early in the growing season as Mint breaks dormancy and begins to grow.

This product will not cause crop injury when applied according to the label under normal growing conditions.

Non-uniform application may result in injury to crops, poor stands or soil residues. Conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity or drought may weaken seedlings and plants and make them more susceptible to herbicidal damage.

### Use Rates:

| Soil Texture | Broadcast Rate<br>(Qts./Acre) |
|--------------|-------------------------------|
| Coarse       | 0.9 to 1.2                    |
| Medium       | 1.2 to 2.4                    |
| Fine         | 1.2 to 2.4                    |

### Use Restrictions on Mint

- Do not apply this product to "baby" Mint in the first year of growth and establishment.
- Do not apply to Mint that has broken dormancy or crop injury may result. Application to Mint that is near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to Mint dormancy break.
- Do not apply to Mint stands that have been weakened by age, disease, cold weather, excessive moisture or other factors that reduce crop vigor. Mint growing under stress is more susceptible to herbicidal damage.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Pre-harvest Interval (PHI): Do not apply within 90 days of harvest.
- Do not allow livestock to graze on treated spent hay or feed treated spent hay to livestock.
- Do not apply this product on Mint through any type of irrigation system.
- Do not use in California except as directed in supplemental labeling.

## NONBEARING FRUIT AND NUT TREES AND NONBEARING VINEYARDS

### Methods of Application, Timing and Rates

- Apply this product as pre-plant incorporated, pre-plant surface, surface incorporated or pre-emergence weed control in several nonbearing Fruit and Nut trees and nonbearing Vineyards. This product may be used before or after transplanting the following nonbearing crops:

|          |            |           |                  |
|----------|------------|-----------|------------------|
| Almonds  | Grapes     | Peaches   | Prunes           |
| Apples   | Grapefruit | Pears     | Tangelo          |
| Apricots | Lemons     | Pecans    | Tangerine        |
| Cherries | Nectarines | Pistachio | Walnut (English) |
| Citrus   | Oranges    | Plums     |                  |

Apply the spray directly to the ground beneath the trees or vines. Do not apply over the top of trees or vines with leaves or buds. Contacting the leaves, shoots or buds with the spray mixture may cause malformed plant tissues. Do not apply to newly seeded nursery stock.

### For newly transplanted and 1 year old Grapevines:

- i) Apply only to dormant Grapevines.
- ii) Do not apply if buds have started to swell. Application after buds have started to swell may result in leaf distortion.
- iii) Do not apply to newly transplanted trees or vines until ground has settled and no cracks are present.

- Apply this product by ground, air, chemigation or by flooded basin irrigation systems.
- Apply this product either in a single application or sequentially with an interval of 30 days or more.
- Apply this product at 2.4 to 4.8 quarts per acre per application depending on the desired length of control (see "Use Rate" table below) but not to exceed a total of 4.8 quarts per acre per year in Pome, Stone and other Fruit trees. In Citrus, Grapevines and Nut trees, do not exceed a total of 7.3 quarts per acre per year.

**Pre-plant Surface:** Prior to transplanting, apply uniformly with ground or aerial equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Pre-plant Incorporated:** Apply uniformly this product prior to transplanting but before weeds emerge. Incorporate this product to a depth of 1 to 2 inches. Application and incorporation must be made prior to transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Pre-emergence (Post-plant):** Applications may be made in a band or broadcast.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section. Do not apply irrigation water treated with this product over the top of trees or vines with leaves or buds.

**Flooded Basin Irrigation Systems:** This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flooded basin irrigation systems under the "APPLICATION INSTRUCTIONS" section.

**Use Rates:**

|                    |                   |
|--------------------|-------------------|
| Short-term control | 2.4 qts. per acre |
| Long-term control  | 4.8 qts. per acre |

**Use Restrictions on Nonbearing Fruit and Nut Trees and Nonbearing Vineyards**

- Do not feed forage or graze livestock in treated fields.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.3 quarts of this product per acre per year in Citrus, Grapevines and Nut trees.

**ONIONS [Direct Seeded and Transplanted Dry Bulb and Shallots (Dry Bulb)]**

**Methods of Application, Timing and Rates**

Apply this product by ground, air or chemigation.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage in California) unless otherwise specified below. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**MINERAL SOILS**

**Methods of Application, Timing and Rates**

In all states except California, apply this product as a broadcast treatment when Onions or Shallots have 2 to 9 true leaves.

**Use Rates:**

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2                        |
| Fine         | 1.8                        |

**State Specific Instructions**

**California:**

This product may only be applied as a single application when Onions or Shallots have 2 to 6 true leaves.

**Additional Use in Colorado, Kansas and Nebraska:**

This product may be applied sequentially in seeded Onions. Apply first application of this product at loop stage. Apply sequential application of this product early post-emergence (2nd to 9th true-leaf stage). Do not exceed the maximum labeled rate for a given soil texture. Do not apply this product at loop stage through the 9th true-leaf stage if heavy rains are expected or severe crop injury may result.

**Additional Use in Colorado and the High Plains of Texas (Transplanted Onions Only):**

Apply and shallow incorporate (less than 2 inches deep) this product into preformed beds prior to transplanting.

**Additional Use in Idaho, Oregon and Washington:**

Apply this product as a broadcast treatment when Onions or Shallots are between the flag leaf to 9th true-leaf stage. This product may be used at 1.8 to 2.4 quarts per acre for Dodder control on medium and fine textured soils. Do not apply this product using chemigation at the Dodder control rate.

This product may be applied in the Fall or Spring to the furrow area of land bedded in the Fall preparation for planting seed of Dry bulb onions the following Spring. Apply this product as a banded application at rates based on appropriate soil texture. Band width should be approximately one-half the width of the row spacing.

Keep away from the area where Onion seed will be planted. Harrow-off tops of beds following furrow applications of this product prior to planting Onions. For selective weed control in the Onion row, apply this product as banded post-emergence to flag leaf Onions at the labeled rates based on soil texture.

Apply this product only once to the furrow area and once to the Onion row as a post-emergence application.

#### **Additional Use in Michigan:**

For mineral soils containing greater than 10% organic matter, follow the directions for muck soils (see "Muck Soils").

#### **Use Restrictions on Mineral Soils**

- Do not incorporate mechanically except as specified for use on dry bulb onions in Colorado and the Texas High Plains.
- Do not exceed 1.8 quarts per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts per acre per crop.
- Pre-harvest Interval (PHI): Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of one-half inch of water.

#### **MUCK SOILS (Except CA)**

##### **Methods of Application, Timing and Rates**

Apply this product sequentially on muck soils as follows:

| <b>Time of Application and Growth Stage</b>       | <b>Rate (Qts./Acre)</b> |
|---|-------------------------|
| Pre-emergence through loop stage                  | 2.4                     |
| Early post-emergence (2nd to 6th true-leaf stage) | 2.4                     |
| Late post-emergence (6th to 9th true-leaf stage)  | 2.4                     |

#### **Use Restrictions on Muck Soils**

- Do not apply to muck soils in California.
- Pre-harvest Interval (PHI): Do not apply within 45 days of harvest.
- Do not feed or graze these crops.
- Do not apply more than 7.2 quarts of this product per acre per growing season on muck soils. To maximize crop safety, ensure good soil coverage during planting or transplanting and delay pre-emergence applications to the loop stage, if possible.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of one-half inch of water.
- Do not plant Spinach, Sugar beets, Red beets, Winter barley or Winter wheat as rotational crops on muck soils for 12 months from the time of last application if more than 1.8 quarts of this product per acre is applied to the Onion crop.
- If loss of Onion crop occurs, do not replant any crop other than Onions in muck soil during the same cropping year and do not work the soil deeper than 2 inches.

#### **PEANUTS (Except CA)**

##### **Methods of Application, Timing and Rates**

- Apply this product by ground, air or chemigation.
- Apply this product pre-plant incorporated.
- Apply this product pre-emergence to Peanuts grown under overhead irrigation.

**Pre-plant Incorporated:** Apply this product up to 60 days prior to planting and incorporate within 7 days after applications.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting and before crop emergence. To prevent decreased crop pegging, adequate incorporation must be achieved by applying a minimum of three-fourths inch of overhead irrigation or rainfall within 48 hours of application.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**Use Rates:**

| Region   | Rate (Qts./Acre) |
|--|------------------|
| New Mexico, Oklahoma and Texas   | 0.6 to 1.2       |
| Other Peanut growing states*   | 1.2              |
| *For heavy weed infestations especially <i>Texas panicum</i> , up to 1.8 quarts of this product per acre can be used in Alabama, Georgia or Florida. |                  |

**POTATOES****Additional Weeds Controlled**

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Potatoes: Stinging nettle.

**Methods of Application, Timing and Rates**

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, pre-emergence incorporated or early post-emergence.

**Pre-emergence:** Apply this product after planting but before Potatoes and weeds emerge or after drag-off.

**Pre-emergence Incorporated:** Apply this product and incorporate after planting but before Potatoes and weeds emerge. Where drag-off is practiced, apply this product and incorporate before, at, or after drag-off but before Potatoes and weeds emerge. Incorporate this product within 7 days of application. This product must be thoroughly and uniformly incorporated into the top 1 to 2 inches of soil. Mechanical incorporation is not required if adequate rainfall for good crop and weed emergence occurs or irrigation is received within 7 days after application. Care must be taken so that incorporation equipment does not damage seed pieces or elongating sprouts.

**Early Post-emergence:** Apply this product from crop emergence to the 6 inch stage of growth. Do not apply this product post-emergence if Potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply this product pre-emergence after planting, after drag-off or early post-emergence through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**Use Rates:**

| Soil Texture | Rate (Qts./Acre)    |                     |
|--------------|---------------------|---------------------|
|              | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse       | 0.9                 | 0.9                 |
| Medium       | 1.2                 | 1.8                 |
| Fine         | 1.8                 | 1.8                 |

**Use Restrictions on Potatoes**

- Do not apply to Sweet potatoes or Yams.
- Do not apply pre-plant.
- Do not make more than 1 application of this product per season.
- Application of this product on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

**RICE****Additional Weeds Controlled**

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Rice: Junglerice and Sprangletop.

**Methods of Application, Timing and Rates**

This product may be applied as a pre-flood, pre-emergence in dry-seeded or drilled Rice or as a delayed pre-emergence application in drilled dry-seeded Rice or as an early post-emergence in dry-seeded Rice. Treatments may be applied to conventional, reduced or minimum tillage and no-till (stale seedbed) Rice. The seedbed should be firm and free of clods and must be prepared to allow for good seed coverage. The use of a planter under conditions that do not allow good soil coverage of the Rice seed can result in reduced stand or stunting if this product contacts germinating Rice seed.

**Pre-Flood, Pre-emergence:** This product may be applied for pre-emergence weed control as a pre-flood, pre-rice germination herbicide in lightly incorporated dry-seeded Rice or on drilled Rice.



### Seeding Directions

For all Rice seed incorporation methods, seed must be incorporated shallowly or no more than 1 inch below soil surface. Seed left on the surface may be injured or killed by this product. **However, to ensure that seed is not covered too deeply, 15 to 20% of seed total has to be visible at surface.** Increase seeding rates by a percentage corresponding to the amount of seed left on the surface. Adjust seeding ratios to meet individual practices, incorporation depths and field conditions. **For Example:** Target seeding rate is 150 pounds per acre. If approximately 15% of seed is left on soil surface, seeding rate should then be increased 22.5 pounds per acre to 177.5 pounds per acre.

Seeding depths can be affected by soil textures, tillage practices, irrigation and methods of mechanical incorporation. Seed that is incorporated either mechanically and/or by irrigation flush must remain at a shallow depth of no more than 1 inch below the soil surface. Fields where Rice seed is incorporated too deeply will experience reduced crop stands.

Following are examples of typical implements that can be used for Rice seed incorporation: Rice roller/ridger, ring roller, light harrow, or flat roller. Regardless of the implement or method of incorporation used, seed incorporation must be less than 1 inch below the soil surface.

After Rice seed is incorporated, uniformly apply to soil surface as broadcast spray the tank mixture of this product at 1.2 quarts of this product per acre plus FirstChoice® SafeGuard™ spray adjuvant at 0.8 quart per acre. Use of this product without tank mixing with FirstChoice SafeGuard spray adjuvant can result in crop injury and loss of Rice stand.

After herbicide application, flush field with irrigation water with method best employed to facilitate a thorough soaking of field and a rapid drain. Recirculate and contain in the field of initial application tail water (runoff water) from flood irrigation that contains this product or use only on adjacent crops for which this product or other pendimethalin-based products is registered for use.

Rice seed covered with water for longer than 8 days may result in reduced stand and weed control.

**Delayed Pre-emergence (Except CA):** Apply this product alone or with tank-mix partner for delayed pre-emergence weed control in grain-drilled, dry-seeded Rice. Apply this product alone or in tank-mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with this product may be injured. Apply only when growth conditions favor vigorous Rice growth. The seedbed should have adequate moisture for seed germination.

Uniformly apply the specified rate of this product after Rice planting and before Rice and weed emergence (spiking). Apply after the Rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch of rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80% of germinated seeds have a primary root (radicle) or shoot at least one-half inch long. If there is insufficient moisture, flush before application of this product to supply moisture for root (radicle) initiation and for vigorous Rice and weed growth.

If applied to soil prior to these conditions or to cracked soil, stand reduction or stunting of Rice may occur. Under some conditions, use of gibberellic acid-treated seed, heavy rainfall after application or flushing after application may result in herbicide injury to Rice. Rice can overcome moderate injury with appropriate cultural practices.

Due to the residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal Rice growth and activity of this product.

**Early Post-emergence:** Apply this product as a tank-mix partner. Base applications on weed and crop size guidelines of the tank-mix partner. Do not apply to fields with standing water. If necessary, fields may be flushed prior to treatment to produce vigorous Rice and weed growth. Since soil and weeds must be completely exposed to spray coverage, no flood water should be on the field at the time of application. Cloddy soil, standing water (puddles) at the time of application or cracks in the soil that form after application may result in reduced weed control.

Because of residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal Rice growth and activity of this product.

Since the residual activity of this product is activated by moisture, this product is most effective in controlling emerging weeds when adequate rainfall or irrigation (flush) is received within 7 days after application.

**Use Rates:**

| Delayed Pre-Emergence Applications                       |                  |
|--|------------------|
| Soil Texture   | Rate (Qts./Acre) |
| Sand, Loamy sand   | DO NOT USE       |
| Sandy loam   | 0.9              |
| Loam, Silt loam, Silt, Sandy clay loam                   | 1.2              |
| Silty clay loam, Clay loam, Sandy clay, Silty clay, Clay | 1.2              |

| Early Post-Emergence Application |                  |
|----------------------------------|------------------|
| Soil Texture                     | Rate (Qts./Acre) |
| Coarse                           | 0.9              |
| Medium                           | 1.2              |
| Fine                             | 1.2              |

**Use Restrictions on Rice**

- Do not apply this product as a pre-flood, pre-emergence treatment in Rice unless tank mixed with FirstChoice SafeGuard spray adjuvant.
- Do not apply this product through any type of irrigation system.
- Do not apply in liquid fertilizer.
- Do not use on water-seeded rice except as specified in other labeling.
- Do not apply to Rice fields if fields are used for fish production, especially catfish or crayfish farming.
- Do not use water containing residues of this product from Rice cultivation to irrigate food or feed crops that are not registered for use with this product.
- In case of a crop failure due to weather conditions or disease following treatment with this product alone or in a tank-mixture, only drilled dry-seeded Rice may be immediately replanted. However, the grower assumes all risks and consequences associated with replanting of Rice because there is the potential for stand reduction or stunting. A 10% percent increase in seeding rate is suggested. Replant seed below the herbicide layer because reduced stand or stunting may occur if this product contacts germinating Rice seed. Do not replant with gibberellic acid-treated seed. Do not reapply this product alone or in a tank mixture.
- Do not apply this product and then flush for germination.
- Do not apply to stressed Rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage or deep water after application.
- Do not apply early pre-emergence or pre-plant incorporated as severe Rice injury is possible.
- Do not feed forage or graze livestock in treated fields.

**SOYBEANS (Except CA)****Additional Weeds Controlled**

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control or reduce competition from the following weeds in Soybeans: Itchgrass and Red rice. (See "Use Rates" below for specific rates for these weeds.)

**Methods of Application, Timing and Rates**

Apply this product in conventional, minimum or no-till as a Fall surface, Fall incorporated, pre-plant surface, pre-plant incorporated or pre-emergence application in Soybeans.

**Fall Applications:** This product may be surface applied or incorporated in the Fall, after Fall harvest and prior to ground freeze in states North of Interstate-80 and the entire states of Iowa, Illinois, Indiana, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma and Texas. Fall applications of this product will not provide season-long weed control.

**Pre-plant Surface:** Apply this product up to 15 days prior to planting. This product may be applied up to 45 days prior to planting when used in a tank-mix or applied sequentially with glyphosate plus imazethapyr, imazamox or imazethapyr. Apply tank-mixes of this product and sequential programs as specified under the tank-mix section.

**Pre-plant Incorporated:** Apply this product up to 60 days prior to planting and incorporate within 7 days after application.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting. Apply to a firm seedbed free of clods. Do not make applications of this product pre-emergence North of Interstate-80 except in the states of Indiana, Michigan and Ohio or as specified in the supplemental labeling.

**Use Rates:**

| Fall Surface, Fall Incorporated, Pre-Plant Surface or Pre-Plant Incorporated Applications                                     |                     |                     |
|---|---------------------|---------------------|
| Soil Texture  | Rate (Qts./Acre)    |                     |
|   | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse  | 0.9                 | 1.2                 |
| Medium  | 1.5*                | 1.8                 |
| Fine**  | 1.8                 | 1.8                 |
| *Do not exceed 1.0 quart of this product per acre for Southern states. See map for specific States in the "USE AREA" section. |                     |                     |
| **For heavy clay soils, apply this product at the broadcast rate of 1.8 quarts of this product per acre.                      |                     |                     |

| Pre-Emergence Applications |                     |                     |
|----------------------------|---------------------|---------------------|
| Soil Texture               | Rate (Qts./Acre)    |                     |
|                            | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse                     | 0.9                 | 0.9                 |
| Medium                     | 1.2                 | 1.2                 |
| Fine                       | 1.2                 | 1.5                 |

| Pre-Plant Incorporated Applications for Red Rice Control and Itchgrass Suppression |                          |
|--|--------------------------|
| Soil Texture   | Rate (Qts./Acre)         |
|  | Up to 3% Organic Matter* |
| Coarse   | 1.8                      |
| Medium   | 1.8                      |
| Fine   | 2.4                      |
| *This use is not for soils with more than 3% organic matter.                       |                          |

**Use Restrictions on Soybeans**

- Do not apply post-emergence on Soybeans or serious crop injury can result.
- Do not use this product in Soybeans in California.
- Pre-harvest Interval (PHI): Do not apply within 85 days of harvest.
- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Soybean fields.

**STRAWBERRIES****Methods of Application, Timing and Rates**

- Apply this product by ground, air or chemigation.
- Stunting, reduced growth, or reduction in daughter plants may occur with this use. Uniformly apply 0.9 to 1.8 quarts of this product per acre as a broadcast spray to the soil surface at pre-transplant time. A second application of 0.9 to 1.8 quarts of this product per acre may be applied in a band to the soil between crop rows 35 days before harvest but DO NOT CONCENTRATE THE RATE per acre into the treated area. Do not allow spray to contact Strawberry plants. The second application rate is based on per unit of treated area.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

Do not allow irrigation water treated with this product to contact Strawberry plants.

**Use Rates:**

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2 to 1.5                 |
| Fine         | 1.5 to 1.8                 |

**Use Restrictions on Strawberries**

- Do not apply more than 1.8 quarts of this product per acre per application.
- Do not apply more than 3.6 quarts of this product per acre per season.
- Pre-harvest Interval (PHI): Do not apply within 35 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply if row is to be covered later with plastic.

## SUGARCANE

### Methods of Application, Timing and Rates

- Apply this product pre-emergence through layby to plant or ratoon Sugarcane.
- Applications may be made band or broadcast. Although there may be adequate crop tolerance for post-emergence applications at layby, spray must be directed under the Sugarcane canopy to obtain effective weed control.
- This product must be thoroughly and uniformly incorporated into the soil with either (a) mechanical incorporation equipment as outlined below or (b) with rainfall or irrigation, if rainfall or irrigation is adequate for good crop and weed emergence and received within 7 days after application. If rainfall or irrigation is not obtained, incorporate this product mechanically.

**Mechanical Incorporation:** Apply this product to loosened beds and incorporate into the top 1 to 2 inches of soil within 7 days after application.

#### Use Rates:

| Use Area                 | Broadcast Rate* (Qts./Acre) |
|--------------------------|-----------------------------|
| All States except Hawaii | 2.4 to 3.6                  |
| Muck soil (Florida only) | 2.4 to 4.85                 |
| Hawaii                   | 2.4 to 4.85                 |

\*Use the high rate if: i) Clay soils. ii) No mechanical incorporation is planned. iii) Heavy weed populations are anticipated. iv) Itchgrass infestation is anticipated. v) Shaving is planned.

#### Use Restrictions on Sugarcane

- Do not exceed 7.2 quarts of this product per acre in one growing season.
- Do not use less than 11 gallons of water as a carrier when applying this product for weed control.
- Ratoon Sugarcane must be lightly shaved in early spring to remove the old stubble before incorporation over the line of Sugarcane if possible. Carefully adjust equipment to incorporate without causing excessive damage to emerging shoots.
- Do not make aerial applications at close-in because complete and uniform coverage cannot be obtained.
- Do not apply through any type of irrigation system.
- Pre-harvest Interval (PHI): Do not apply within 90 days of harvest.
- Do not graze treated fields or feed treated forage or fodder to livestock.

## SUNFLOWER

### Methods of Application, Timing and Rates

- Apply this product pre-plant incorporated in all states.
- Fall pre-plant incorporated applications may be made in Minnesota, North Dakota and South Dakota.
- Apply this product pre-emergence in conventional tillage Sunflower except in California.

**Note:** Plant Sunflower 1.5 to 2 inches deep and completely cover with soil.

**Pre-plant Incorporated (Spring):** Apply up to 60 days prior to planting and incorporate within 7 days after application.

**Pre-plant Incorporated (Fall Applications in Minnesota, North Dakota and South Dakota):** Apply this product and immediately incorporate in late Fall prior to planting Sunflower the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes. Do not apply when air temperature is below 45°F. Prior to planting Sunflower in the Spring, fields treated with this product should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting. Pre-emergence applications of this product to Sunflowers may increase the likelihood of crop injury especially when Sunflowers are grown in stress situations such as compacted soils. Decreased herbicide performance compared to pre-plant incorporated applications may also result from a pre-emergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures following planting are forecasted, apply this product prior to planting and mechanically incorporate with tillage.

#### Use Rates:

| Pre-Plant Incorporated (Spring) or Pre-Emergence (Conventional Tillage) |                  |                     |                     |
|---|------------------|---------------------|---------------------|
| Soil Texture  | Southern States* | Northern States     |                     |
|   | Rate (Qts./Acre) | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse  | 0.9              | 1.2                 | 1.2                 |
| Medium  | 1.2              | 1.5                 | 1.8                 |
| Fine  | 1.8              | 1.8                 | 1.8                 |

\*See map of specific states under the "USE AREA" section.



| Pre-Plant Incorporated (Fall) Application* |                     |                     |
|--|---------------------|---------------------|
| Soil Texture                               | Rate (Qts./Acre)    |                     |
|  | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse                                     | 1.5                 | 1.5                 |
| Medium                                     | 1.8                 | 2.1                 |
| Fine                                       | 2.1                 | 2.1                 |

\*For use in Minnesota, North Dakota and South Dakota only.

## SUNFLOWER (No-Till) (Except CA)

### Methods of Application, Timing and Rates

Apply this product at 2.8 quarts per acre up to 30 days before planting (pre-plant) up to immediately after planting (pre-emergence).

This product is most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application.

### Use Restrictions (All Tillage Types)

- Do not apply this product post-emergence.
- Do not feed forage or graze livestock in treated sunflower fields.
- Do not use in California.

## TOBACCO

### Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or as a layby application in transplanted Tobacco.

**Pre-plant Incorporated:** Apply this product with ground sprayer up to 60 days prior to transplanting Tobacco and incorporate within 7 days after application.

Applied according to directions and under normal growing conditions, this product will not harm transplanted Tobacco. Under stress conditions for plant growth such as cold/wet or hot/dry weather, this product can produce a temporary retardation of Tobacco development.

**Layby:** This product may be applied as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting Tobacco. Apply this product in a 16 to 24 inch band between the crop rows. The spray should not contact Tobacco plants.

### Use Rates:

| Pre-Plant Incorporated Application                                   |                               |                  |
|--|-------------------------------|------------------|
| Use Area   | Soil Texture                  | Rate (Qts./Acre) |
| Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia | Coarse                        | 1.2              |
|  | Medium: Sandy clay loam, Loam | 1.2              |
|  | Medium: Silt loam, Silt       | 1.5              |
|  | Fine                          | 1.5              |
| Other States   | Coarse                        | 1.2              |
|  | Medium                        | 1.8              |
|  | Fine                          | 1.8              |

| Layby Application |                  |
|-------------------|------------------|
| Soil Texture      | Rate (Qts./Acre) |
| Coarse            | 0.9              |
| Medium            | 1.2              |
| Fine              | 1.2              |

### Use Restrictions on Tobacco

Do not apply as a broadcast spray as contact may cause malformed Tobacco leaves.



## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Do not store below 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals redissolve.

**PESTICIDE DISPOSAL:** To avoid waste, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often, such programs are run by State or local governments or by industry).

### CONTAINER HANDLING:

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Refillable Container (≥ 250 gallons & Bulk):** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

## WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. To the extent consistent with applicable law, Manufacturer makes no other warranties or representations of any kind, expressed or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

PIN-DEE and the Drexel logo are either trademarks or registered trademarks of Drexel Chemical Company. All other brand names, product names or trademarks belong to their respective holders.



**Drexel Chemical Company**

January 12, 2017

Document Processing Desk (**AMEND**)  
**ATTN: MR. REUBEN BARIS, PM 25**  
Office of Pesticide Programs (7505P)  
U.S. Environmental Protection Agency  
Rm S-4900, One Potomac Yard  
2777 S Crystal Drive, Arlington, VA 22202

***Re: Submission of Alternate CSF#2 and Revised Label in Conjunction with the Proposed Amendment for Drexel Pendimethalin Technical Submitted January 12, 2017 (EPA Reg. No. 19713-600)  
PIN-DEE 3.3 EC (EPA Reg. No. 19713-668)***

Dear Mr. Baris,

In conjunction with our amendment submission to the Agency dated 01/12/2017 to add use sites on the Drexel Pendimethalin Technical (Reg. No. 19713-600) label, we would like to submit the following:

1. Completed EPA Form 8570-1
2. Copy of the current basic and alternate CSF dated 02/23/2015 for Pin-Dee 3.3 EC (19713-668).
3. Two copies of the proposed Alternate CSF#2 adding Drexel Pendimethalin Technical (Reg. No. 19713-600) as the starting material for the above product.
4. Copy of the Agency currently accepted label with the marked up changes.
5. Three copies of the revised label with the proposed changes to be in line with the uses being proposed added to the Drexel Pendimethalin Technical label:

On page 1:

- Added "Except Alfalfa" after "Forage Legumes" to the statement appearing above the ingredient statement. Also deleted Wheat from the said statement.

On page 17:

- Added "Except Alfalfa" after "Forage Legumes" section

On page 29:

- Deleted the directions for use on Wheat



## Drexel Chemical Company

Also, we have made the following label updates:

- On page 1, in the First Aid box, the CHEMTREC referral was made to read "You may also call CHEMTREC .....for medical emergency information. The words "medical" and "information" were added to the sentence.
- On page 4, added the California footnotes to match EPA Reg. No. 241-337 label accepted by EPA on February 23, 2016.
- On page 5, restated the statements for early post-emergence applications and post-emergence incorporation applications. Also, for better reading, deleted the word "and" from the first sentence for "split applications".
- On page 10, under 'Tank-Mixing Information', the sentences "In addition, follow all use.....most restrictive label." was replaced with the statement "It is the pesticide user's responsibility.....in the tank-mixture."
- On page 10, to make it consistent with the "Tank-Mixing Information", deleted the statements under "Tank-Mixture With other Products" and the last sentence was restated.
- On page 22, under "State Specific Instructions", added the phrase "Additional use in" for the listed states.
- On page 30, the Pesticide Disposal statements were replaced by the statements from the Label Review Manual for clarity.

If you have questions/clarification regarding this submission, I can be reached at (901) 774-4370 or e-mail lchan@drexchem.com.

Thank you.

Respectfully yours,  
FOR DREXEL CHEMICAL COMPANY

Luz G Chan  
Registration Manager



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☒ Amendment  
☐ Other

OPP Identifier Number

## Application for Pesticide - Section I

|   |  |  |
|---|--|--|
| 1. Company/Product Number<br>19713-668  | 2. EPA Product Manager<br>Reuben Baris   | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>PIN-DEE 3.3 EC   | PM#<br>25  |  |
| 5. Name and Address of Applicant (Include ZIP Code)<br>Drexel Chemical Company<br>P.O. Box 13327<br>Memphis, TN 38113-0327<br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |  |

## Section - II

|  |  |
|--|--|
| <input checked="" type="checkbox"/> Amendment - Explain below.                 | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.   |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.  |

## Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of Alternate CSF#2 and revised label in conjunction with the proposed label amendment submitted to EPA on January 12, 2017 for Drexel Pendimethalin Technical (Reg. No. 19713-600). Details are in the cover letter accompanying this submission.

## Section - III

|   |  |   |                                      |  |  |
|---|--|---|--------------------------------------|--|--|
| 1. Material This Product Will Be Packaged In:   |  |   |                                      | 2. Type of Container   |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No   | Unit Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No |                                      | <input checked="" type="checkbox"/> Metal                                |  |
| * Certification must be submitted   |  |   |                                      | <input type="checkbox"/> Plastic   |  |
|   | If "Yes" Unit Packaging wgt.   | No. per container   | If "Yes" Package wgt.                | <input type="checkbox"/> Glass   |  |
|   |  |   |                                      | <input type="checkbox"/> Paper   |  |
|   |  |   |                                      | <input type="checkbox"/> Other (Specify) _____                           |  |
| 3. Location of Net Contents Information<br><input checked="" type="checkbox"/> Label <input type="checkbox"/> Container   |  | 4. Size(s) Retail Container<br>less than 5 gallons; 5 gals. and greater                           |                                      | 5. Location of Label Directions<br><input type="checkbox"/> On the label |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |  |   | <input type="checkbox"/> Other _____ |  |  |

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

|                    |                               |   |
|--------------------|-------------------------------|---|
| Name<br>LUZ G CHAN | Title<br>REGISTRATION MANAGER | Telephone No. (Include Area Code)<br>(901) 774-4371 |
|--------------------|-------------------------------|---|

## Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received  
(Stamped)

|                             |                                  |
|-----------------------------|----------------------------------|
| 2. Signature<br>            | 3. Title<br>REGISTRATION MANAGER |
| 4. Typed Name<br>LUZ G CHAN | 5. Date<br>01/12/2017            |



resubmission

Schmid, Emily

---

**From:** Luz Chan <lchan@drexchem.com>  
**Sent:** Friday, May 26, 2017 4:21 PM  
**To:** Schmid, Emily  
**Subject:** FW: Amendment (EPA Reg. No. 19713-668)  
**Attachments:** 019713-000668.20170426 with ES + RB comments .pdf; 019713-000668.201705026 .pdf; 019713-000668.201705026 .pdf

Emily, thank you for working on our label.

Attached, please find the marked and clean label.

We respectfully would like to maintain the current format on page 8 of the label. We don't anticipate the printing being affected by it.

If there's anything needed on this, just please let me know.

Thank you,

Luz

**From:** Schmid, Emily [mailto:Schmid.Emily@epa.gov]  
**Sent:** Friday, May 26, 2017 1:25 PM  
**To:** Luz Chan <lchan@drexchem.com>  
**Subject:** RE: Amendment (EPA Reg. No. 19713-668)

Hi Luz,

I have attached a pdf with our comments for this one as well.

Thanks,  
Emily

**From:** Luz Chan [mailto:lchan@drexchem.com]  
**Sent:** Wednesday, April 26, 2017 9:42 AM  
**To:** Schmid, Emily <Schmid.Emily@epa.gov>  
**Cc:** Scott Pace <space@drexchem.com>  
**Subject:** RE: Amendment (EPA Reg. No. 19713-668)

Emily, good morning.

Please find the pdf label.

Yes, we are amending the label but we are also proposing an alternate CSF (CSF#2) for this product.

Currently, we have only a basic CSF and alternate CSF accepted by the Agency. We are requesting to add an alternate CSF#2 in conjunction with our submission to the Agency for our Pendimethalin Technical (19713-600).

If you still have questions, just kindly let me know.

Thanks, Emily.

Luz G Chan

(901) 774-4370

**From:** Schmid, Emily [mailto:Schmid.Emily@epa.gov]  
**Sent:** Tuesday, April 25, 2017 12:29 PM



**To:** Luz Chan <lchan@drexchem.com>

**Subject:** Amendment (EPA Reg. No. 19713-668)

Hi Luz,

I have also been assigned the amendment you submitted for Pin-Dee 3.3 EC (EPA Reg. No. 19713-668). Could you email a pdf of that label too? I only need clean copies, not the marked up ones.

For this action, you are just amending the label right? I'm confused because the application says you are submitted alternate CSF #2 but that appears to be an already accepted CSF.

Thank you,

Emily Schmid  
Biologist  
U.S. Environmental Protection Agency  
Registration Division  
Herbicide Branch

NOTICE: This email, together with any attachments, may contain confidential, privileged, or non-public information. If you are not the intended recipient of this email, please delete without copying, and notify the sender of the error. Do not forward this email without permission from the sender. This email is not a contract, and cannot be used to show the existence of a valid contract between Drexel Chemical Company, the sender, or any recipient. Use, dissemination, distribution, or reproduction of this message by unintended recipients is not authorized and may be unlawful.

NOTICE: This email, together with any attachments, may contain confidential, privileged, or non-public information. If you are not the intended recipient of this email, please delete without copying, and notify the sender of the error. Do not forward this email without permission from the sender. This email is not a contract, and cannot be used to show the existence of a valid contract between Drexel Chemical Company, the sender, or any recipient. Use, dissemination, distribution, or reproduction of this message by unintended recipients is not authorized and may be unlawful.

S: 997714

Milestone Email:

Regulatory Type: Product Registration - Section 3

Resubmission: ☐ Yes ☒ No

Print Letter

Application Type: Amendment

Fee For Service: ☐ Yes ☒ No

Enter More Information

Billable: ☐ Yes ☒ No

Tracking

Company: 19713 DREXEL CHEMICAL COMPANY

V

Risk Manager: Registration Division, Risk Management Team 25

Product #: 19713-668

Product Name: PIN-DEE 3.3 EC

Override#:

Me Too  
Section3: 241-337

Me Too Product  
Name: PROWL 3.3 EC HERBICIDE

| Receipt Content | Des |
|-----------------|-----|
| CSF             |     |
| Paper Label     |     |
| III             |     |

View/Edit

Application Date: 12-Jan-2017

OPP Rec'd Date: 18-Jan-2017

Front End Date: 18-Jan-2017

Risk Manager Send Date: 23-Jan-2017

FFS Due Date:

Negotiated Due Date:

OPP Target Date:

Fast Track: ☐

New Ingredient: ☐

Receipt Description:

LABEL AMENDMENT

New Ingredient

Request Date:

New Ingredient

Received Date:

Form A: ☐

Signature Date:

Form B: ☐

Signature Date:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

January 23, 2017

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

LUZ G. CHAN  
DREXEL CHEMICAL COMPANY  
PO Box 13327  
MEMPHIS, TN 38113-0327

PRODUCT NAME: PIN-DEE 3.3 EC  
COMPANY NAME: DREXEL CHEMICAL COMPANY  
OPP IDENTIFICATION NUMBER:  
EPA FILE SYMBOL: 19713-668  
EPA RECEIPT DATE: 01/18/17

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application appears to qualify for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability for fast track status.

If you have any questions, please contact Registration Division, Risk Management Team 25, at (703) 305-7356.

Sincerely,

A handwritten signature in black ink, appearing to be "Sincerely," followed by a stylized signature.

Front End Processing Staff  
Information Services Branch  
Information Technology & Resources Management Division

③

## Fee for Service

{997714=~

This package includes the following

- ☐ New Registration
- ☒ Amendment

☐ Studies?    ☐ Fee Waiver?

☐ volpay    % Reduction: \_\_\_\_

for Division

- ☐ AD
- ☐ BPPD
- ☒ RD

Risk Mgr. 25

Receipt No.

S- 997714

EPA File Symbol/Reg. No.

19713-668

Pin-Punch Date:

1/18/2017

☒ This item is NOT subject to FFS action.

### Action Code:

Requested:

Granted:

Amount Due: \$ \_\_\_\_

### Parent/Child Decisions:

*D. Dehesari 1.26.17*

☒ Inert Cleared for Intended Use

☐ Uncleared Inert in Product

Reviewer: *Dee Colby*

Date: *23-Jan-2017*

Remarks: *CSF & label amendment  
... possibly 2 actions*



# FAST-TRACK AMENDMENTS - Completeness Screening Checklist *Food-use 920*

Expert's In-Processing Signature: L. Pabel Date: 1/26/17 PM #: 25

| EPA Reg. Number: <u>19713-668</u>   |  | EPA Receipt Date: <u>1/18/17</u>    |                                     |                                     |
|---|--|-------------------------------------|-------------------------------------|-------------------------------------|
|   | Checklist Item   | Yes                                 | No                                  | N/A                                 |
| 1   | Application Form (EPA Form 8570-1) - signed?                                 | <input checked="" type="checkbox"/> |                                     |                                     |
| 2   | Confidential Statement of Formula (EPA Form 8570-29) - signed?               | <input checked="" type="checkbox"/> |                                     |                                     |
| 3   | Certification with Respect to Citation of Data (EPA Form 8570-34) - signed?  |                                     |                                     | <input checked="" type="checkbox"/> |
| 4   | Formulator's Exemption Statement (EPA Form 8570-27) - signed?                |                                     | <input checked="" type="checkbox"/> |                                     |
| 5   | Data Matrix (EPA Form 8570-35) [Applicable for adding me-too uses] - signed? |                                     |                                     | <input checked="" type="checkbox"/> |
|   | a) Selective Method?   |                                     |                                     |                                     |
|   | b) Cite-All Method?  |                                     |                                     |                                     |
|   | c) Public copy of Matrix provided? See PR Notice 98-5                        |                                     |                                     |                                     |
| 6   | Is Label included? (5 copies)  | <input checked="" type="checkbox"/> |                                     |                                     |
|   | a) Electronic Label submitted?   |                                     | <input checked="" type="checkbox"/> |                                     |
| <p><b>Comments:</b></p> <p><i>Inserts review requested</i></p> <p><i>label + CSF amendments</i></p> <p><i>Inserts approved for one intended-use.</i></p> <p><i>PD. Dobson 1.26.17</i></p> |  |                                     |                                     |                                     |



# PROCESSING REQUEST

Reg # ~~509514~~ 19713-668 Decision # ~~19713-668~~ 509514

Description: Label Notification

Electronic Label & Letter  
(see PPLS):

OR

Non Electronic  
Label & Letter  
(Scanning required):



Dated: 9/29/15



Dated:

\*\*\*Only one label type should be selected\*\*\*

Other Materials Sent (see jacket):



New CSF(s) Dated:



Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Emily Schmid

Division: RD/HB

Phone: 347-0189

Date: 9/29/15



**Drexel Chemical Company**

August 28, 2015

Document Processing Desk (**NOTIF**)  
Office of Pesticide Programs (7505P)  
U.S. Environmental Protection Agency  
Rm S-4900, One Potomac Yard  
2777 S Crystal Drive, Arlington, VA 22202

**Re: Submission of Revised Label**  
**PIN-DEE 3.3EC (EPA Reg. No. 19713-668)**

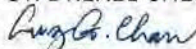
Sir/Madam:

Herewith, please find:

1. Completed EPA Form 8570-1
2. Two copies (one is marked up) of the label with the following typographical errors corrected:
  - i) On page 20, under Lentils and peas, the statement "Apply this product in the Fall pre-plant surface or pre-plant incorporated....." was corrected to read "Apply this product pre-plant surface or pre-plant incorporated.....". "in the Fall" was removed from the sentence as lentils and peas are not only planted in the Fall.
  - ii) On page 27, in the pre-emergence applications table for soybeans, the asterisk appearing after "Fine" soil was deleted. This asterisk came from the "Fall Surface, Fall Incorporated, Pre-plant Surface...." table when copied and pasted.
  - iii) On page 29, in the "Layby Application" table, "Broadcast Rate\* (Qts./Acre)" was corrected to "Rate (Qts./Acre)". "Broadcast" was deleted as it is inconsistent with the statement "Do not apply as a broadcast spray as contact may cause....." appearing under the table. The asterisk was also deleted as it has no purpose.
  - iv) Also on page 29, under Wheat, "Winter" which was inadvertently left off the sentence was added.

If you have questions/clarification regarding this submission, I can be reached at (901) 774-4370 or e-mail lchan@drexchem.com. Thank you.

Respectfully yours,  
FOR DREXEL CHEMICAL COMPANY

  
Luz G Chan  
Registration Manager



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

|   |  |  |
|---|--|--|
| 1. Company/Product Number<br>19713-668  | 2. EPA Product Manager<br>Reuben Baris   | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>PIN-DEE 3.3 EC   | PM#<br>25  |  |
| 5. Name and Address of Applicant (Include ZIP Code)<br>Drexel Chemical Company<br>P.O. Box 13327<br>Memphis, TN 38113-0327<br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |  |

## Section - II

|  |  |
|--|--|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.   |
| <input checked="" type="checkbox"/> Notification - Explain below.              | <input type="checkbox"/> Other - Explain below.  |

## Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of revised label. Details are in the cover letter accompanying this submission.

This notification is consistent with the provisions of PR Notice 98-10 and EPA Regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the Confidential Statement of Formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

## Section - III

|  |  |   |                                      |   |                      |
|--|--|---|--------------------------------------|---|----------------------|
| 1. Material This Product Will Be Packaged In:  |  |   |                                      | 2. Type of Container  |                      |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No  | Unit Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No |                                      | <input checked="" type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |                      |
| * Certification must be submitted  |  |   | If "Yes" Unit Packaging wgt.         | No. per container   | If "Yes" Package wgt |
|  |  |   |                                      |   |                      |
| 3. Location of Net Contents Information<br><input checked="" type="checkbox"/> Label <input type="checkbox"/> Container  |  | 4. Size(s) Retail Container<br>less than 5 gallons; 5 gallons and greater                         |                                      | 5. Location of Label Directions<br><input checked="" type="checkbox"/> On the label   |                      |
| 6. Manner in Which Label is Affixed to Product<br><input checked="" type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |  |   | <input type="checkbox"/> Other _____ |   |                      |

## Section - IV

|  |  |                                  |  |   |   |
|--|--|----------------------------------|--|---|---|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)  |  |                                  |  |   |   |
| Name<br>Luz G Chan   |  | Title<br>Registration Manager    |  | Telephone No. (Include Area Code)<br>(901) 774-4370 |   |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |                                  |  |   | 6. Date Application Received<br>(Stamped) |
| 2. Signature<br>   |  | 3. Title<br>Registration Manager |  |   |   |
| 4. Typed Name<br>Luz G Chan  |  | 5. Date<br>08/28/2015            |  |   |   |
|  |  |                                  |  |   |   |



# Receipt for Section 3

S: 973754

Milestone Email:

Regulatory Type: Product Registration - Section 3



Resubmission: ☐ Yes ☒ No

Application Type: Notification



Fee For Service: ☐ Yes ☒ No

Print Letter

Enter More Information

Tracking

Company: 19713 DREXEL CHEMICAL COMPANY



Risk Manager: Registration Division, Risk Management Team 25



Product #: 19713-668

Product Name: PIN-DEE 3.3 EC

Override#:

Me Too  
Section3: 241-337

Me Too Product  
Name: PROWL 3.3 EC HERBICIDE

Application Date: 28-Aug-2015



OPP Rec'd Date: 02-Sep-2015



Front End Date: 02-Sep-2015



Risk Manager Send Date: 02-Sep-2015



FFS Due Date:

Negotiated Due Date:

OPP Target Date:

Fast Track: ☐

New Ingredient: ☐

Receipt Description:

Label Notification to correct typographical errors as indicated on pgs 20, 27 & 29

New Ingredient

Request Date:

New Ingredient

Received Date:

Form A: ☐

Signature Date

Form B: ☐

Signature Date:

Receipt Content

Des

Paper Label

View/Edit





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 29, 2015

Luz G. Chan  
Registration Manager  
Drexel Chemical Company  
1700 Channel Avenue  
Memphis, TN 38113-0327

Subject: Notification per PRN 98-10 – Correcting minor typographical errors  
Product Name: PIN-DEE 3.3EC  
EPA Registration Number: 19713-668  
Application Date: August 28, 2015  
Decision Number: 509514

Dear Ms. Chan:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you have any questions, please contact Emily Schmid by phone at 703-347-0189, or via email at [schmid.emily@epa.gov](mailto:schmid.emily@epa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Emily Schmid" followed by a small flourish.

Reuben Baris, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs




**Drexel**

# ***Pin-Dee™ 3.3 EC***

Herbicide

For use on Bearing Citrus Fruit Trees, Bearing Nut Trees, Bearing Pome Fruit Trees, Bearing Stone Fruit Trees, Carrots, Carrots Grown For Seed, Corn (Field, Pop, Seed, Sweet), Cotton, Edible Beans, Forage Legumes, Fruiting Vegetables (Pepper, Tomatoes), Garlic, Grain Sorghum, Juneberry, Leek, Lentils, Mint, Nonbearing Fruit Tree and Nut Trees, Nonbearing Vineyards, Onions (Dry, Bulb, Green), Peas, Pomegranate, Shallots, Peanuts, Potatoes, Rice, Soybeans, Strawberries, Sugarcane, Sunflowers, Tobacco, Wheat.

**ACTIVE INGREDIENT:**

Pendimethalin..... 37.4%

**OTHER INGREDIENTS\*:** ..... 62.6%

**TOTAL:** ..... 100.0%

This product contains 3.3 pounds of pendimethalin per gallon.

\* Contains petroleum distillate.

## **KEEP OUT OF REACH OF CHILDREN CAUTION**

See FIRST AID Below

EPA Reg. No. 19713-668

EPA Est. No. 19713-XX-X

Net Content: \_\_\_\_\_

### **FIRST AID**

**IF SWALLOWED:**

- Immediately call a poison control center or doctor for treatment advice.
- Do not give any liquid to person.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency.

**NOTE TO PHYSICIAN:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Manufactured By:

**Drexel Chemical Company**

P.O. BOX 13327, MEMPHIS, TN 38113-0327

**SINCE 1972**

### **NOTIFICATION**

19713-668

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

9/29/2015

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

**CAUTION:** Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE CLOTHING (PPE)

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils or viton  $\geq$  14 mils and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

## USER SAFETY RECOMMENDATIONS

**Users should:** 1) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 2) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide protection.

This label must be in the possession of the user at the time of pesticide application. Observe all precautions and restrictions in this label and the labels of products used in combination with this product. The use of this product not consistent with this label can result in injury to crops, animals or persons.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands or animals.

Do not enter or allow other people (or pets) to enter the treated area until sprays have dried.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), notification to workers and Restricted Entry Interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry to treated areas during the REI of 24 hours.

**Exception:** If the product is soil-injected or soil-incorporated, the WPS, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated such as plants, soil or water is: Coveralls, chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils or viton  $\geq$  14 mils and shoes plus socks.

## PRODUCT INFORMATION

PIN-DEE 3.3 EC is a selective herbicide for controlling most annual grasses and certain broadleaf weeds as they germinate. This product will not control established weeds. Destroy emerged weeds prior to application.

This product is most effective in controlling weeds mechanically incorporated or when incorporated into the weed germination zone by adequate rainfall or overhead irrigation after application.

Unusually cold, excessively wet or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

Uneven application or improper soil incorporation can decrease weed control or cause crop injury. Soil incorporation deeper than directed can reduce weed control. Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration or drought can weaken seedlings and plants and increase the possibility of crop damage from this product. Under these conditions, crop yields can be reduced.

In the event of crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted without adverse effects the same year (see "CROPS" section for exceptions).

## ENDANGERED SPECIES PROTECTION

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a bulletin, and to obtain that bulletin, consult <http://www.epa.gov/espp/> or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use bulletins that are in effect in the month in which the pesticide will be applied. New bulletins will generally be available from the above sources 6 months prior to their effective dates.

If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASABE fine to medium/coarse nozzles.
- If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger). Wind can be no more than 8 mph and release height must be 15 feet or less.

## RESISTANCE MANAGEMENT

|       |          |           |
|-------|----------|-----------|
| GROUP | <b>3</b> | HERBICIDE |
|-------|----------|-----------|

This product is a Group 3 herbicide. It is a meristematic inhibitor that interferes with the plant's cellular division or mitosis. This and/or other products with the meristematic inhibiting mode of action may not effectively control naturally occurring biotypes of some of the weeds listed on this label. A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct genetic makeup from other plants. Other herbicides with the meristematic inhibiting mode of action include other dinitroaniline herbicides such as trifluralin.

Weed species with acquired resistance to Group 3 herbicides may eventually dominate the weed population if Group 3 herbicides are used repeatedly in the same field or in successive years as primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 3 herbicides. To delay herbicide resistance, consider:

- Avoiding the consecutive use of this product or other target site of action Group 3 herbicides that have a similar target site of action on the same weed species.
- Using tank-mixtures or pre-mixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank-mix or pre-pack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

## WEEDS CONTROLLED

See "CROPS" section for additional weeds controlled.

| Weeds Controlled By Up to 2.4 Quarts of This Product Per Acre   |  |  |
|---|--|--|
| Grasses   |  |  |
| Annual ryegrass<br>Barnyardgrass<br>Canarygrass*<br>Cheat*<br>Crabgrass<br>Crowfootgrass<br>Downy brome* (Cheatgrass)<br>Foxtail (Giant)<br>Foxtail (Green) | Foxtail (Yellow)<br>Goosegrass<br>Hairy chess*<br>Itchgrass*<br>Italian ryegrass*<br>Japanese brome*<br>Johnsongrass (Seedling)<br>Jointed goatgrass*<br>Oat (Wild)* | Panicum (Fall)<br>Panicum (Texas)<br>Sandbur (Field)<br>Shattercane*<br>Signalgrass*<br>Wild proso millet*<br>Witchgrass<br>Woolly cupgrass* |
| Broadleaves   |  |  |
| Amaranth (Palmer)<br>Bugloss (Small)<br>Carpetweed<br>Chickweed (Common)*<br>Henbit<br>Kochia<br>Lady's thumb   | Lambsquarters (Common)<br>Lambsquarters (Slimleaf)<br>London rocket*<br>Mustard (Black)<br>Pigweed spp.<br>Purslane<br>Pusley (Florida)                              | Shepherdspurse*<br>Smartweed (Pennsylvania)*<br>Spurge (annual)<br>Velvetleaf*<br>Waterhemp spp.   |
| *Suppression but controlled when use rate of this product is greater than 2.4 quarts per acre.  |  |  |

| Weeds Controlled By 2.4 Quarts or Greater of This Product Per Acre  |  |  |
|---|--|--|
| Grasses   |  |  |
| Annual bluegrass<br>Browntop Panicum<br>Guinea grass  | Junglerice<br>Lovegrass<br>Sprangletop (Mexican) | Sprangletop (Red)<br>Swollen fingergrass |
| Broadleaves   |  |  |
| Dodder*<br>Fiddleneck   | Knotweed (Prostrate)<br>Morningglory**           | Puncturevine                             |
| *Use the highest labeled rate of this product specified in the specific crop for optimum control of Dodder. |  |  |
| **Suppression   |  |  |

## APPLICATION RATE

Use rates for this product when used alone, in tank-mix or sequential applications are given in the "CROPS" section. Use rates of this product vary by soil texture and organic matter. See the following table for soil texture groupings used in this label.

| Soil Texture  | Soil Type   |
|---|---|
| Coarse  | Loamy sand, Sand, Sandy loam                        |
| Medium  | Loam, Sandy clay, Sandy clay loam*, Silt, Silt loam |
| Fine  | Clay, Clay loam, Silty clay, Silty clay loam*       |
| Peat and Muck**   | -   |
| *Sometimes considered as transitional soils and may be classified as either medium or fine textured soil.   |   |
| **This product may be used on peat and muck soils but weed control may be inconsistent and/or reduced. Use maximum labeled use rate allowed in the specific crop. |   |

## TIMING OF APPLICATION

This product will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into the soil within 7 days after application by rainfall, sprinkler irrigation or mechanical tillage prior to weed seedling emergence from soil. This product can also be applied through chemigation including flooded basin irrigation systems. Apply this product as pre-plant surface, pre-plant incorporated, surface incorporated, pre-emergence, early post-emergence, post-emergence incorporated (CULTI-SPRAY) or layby treatment. See the "CROPS" section for specific application directions by crop.



**Pre-plant Surface Applications:** Apply this product alone or in tank-mixtures up to 45 days before planting in minimum tillage or no-tillage production systems. When making early pre-plant surface applications (15 to 45 days prior to planting), tank-mix this product or follow by a post-emergence herbicide application. Rainfall or sprinkler irrigation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate.

**Pre-plant Incorporated Applications:** Apply this product and incorporate into the upper (1 to 2 inches) soil surface up to 60 days before planting. Use an implement capable of giving uniform incorporation. Two-pass incorporation usually results in a more consistent result.

**Surface Incorporated Applications:** Uniformly apply this product as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between tree rows. Within 7 days after application, incorporate into upper (1 inch to 2 inches) soil surface using either rainfall, sprinkler irrigation or shallow mechanical incorporation using an implement capable of giving uniform incorporation. Two-pass mechanical incorporation usually results in a more consistent result.

**Pre-emergence Surface Applications:** Broadcast treatment uniformly to the soil surface at planting and up to 2 days after planting. Rainfall, sprinkler irrigation or shallow mechanical incorporation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate. If adequate rainfall or irrigation does not occur and weed seedling emergence begins, a shallow cultivation or rotary hoeing will improve performance.

**Early Post-emergence Applications:** This product must be applied prior to weed seedling emergence or in a tank-mix with products that control the emerged weeds. Refer to the "CROPS" section for specific post-emergence application directions by crop.

**Post-emergence Incorporated Applications (CULTI-SPRAY):** Prior to application, crop must be cultivated in such a manner as to throw at least 1 inch of soil over the base of the crop plants. This will prevent direct contact of this product and the zone of brace root formation. This product must be applied broadcast with a ground sprayer when crop is at least 4 inches tall up to layby. Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows. Thoroughly and uniformly incorporate treatments of this product into the soil with (1) a sweep-type or rolling cultivator set to provide thorough incorporation in the top 1 inch of soil or (2) adequate overhead irrigation water or rainfall. See "CORN" and "GRAIN SORGHUM" under the "CROPS" section for more details on Culti-Spray application.

**Layby Application:** Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (layby). See the "CROPS" section for more details on layby application.

**Split Applications:** This product may be applied pre-plant incorporated up to 60 days prior to planting and followed by a pre-emergence application at planting or up to 2 days after planting. The total amount of this product applied per acre per season cannot exceed the highest specified rate for any given soil type. See the "CROPS" section for more details on split applications.

**Fall Applications:** This product may be used in Fall application programs in certain crops. See the "CROPS" section for details on Fall application timing.

## APPLICATION INSTRUCTIONS

This product may be applied using either water or sprayable fluid fertilizer (such as straight 32-0-0 or 28-0-0) as the spray carrier. Additionally, this product may be impregnated on dry bulk fertilizer. Do not use sprayable fluid fertilizer as a carrier after crop emergence unless the typical fertilizer burn symptoms on the crop are acceptable.

### AERIAL APPLICATION

Uniformly apply in 5 or more gallons of water per acre. Exercise precautions to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.

### GROUND APPLICATION (BROADCAST)

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre or 20 or more gallons of liquid fertilizer per acre. Use sprayers equipped with appropriate nozzles that provide uniform and accurate spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle and in-line screens

must be no finer than 50 mesh. Application of this product during periods of gusty winds may result in uneven applications. Do not apply this product post-emergence in liquid fertilizers.

If liquid fertilizer/herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result. Always predetermine the compatibility of this product alone or with other herbicides based on the following compatibility jar test:

1. Add 1 pint of fertilizer to a quart jar.
2. Add 1 to 4 teaspoons of the Dry Flowable (DF), Wettable Powder (WP), Aqueous Solution (SL), Flowable (SC) or Liquid (L) formulation (depending on mixing ratio required) to the liquid fertilizer. The number of teaspoons of the formulation to add can be determined by the following formula:

$$\frac{\text{Lbs. or Pts. of the Product/Acre}}{\text{Gals. of Fertilizer/Acre}} \times 11.4 = \text{No. of Teaspoons of Herbicide to Add to 1 Pint of Fertilizer}$$

3. Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
4. After dispersing the materials, add appropriate number of teaspoons of this product to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes and then observe the results. Look for signs of separation: an oily layer or globules, sludge, flakes or other precipitates.
5. Evaluate compatibility.
  - (a) If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
  - (b) If the mixture separates but mixes readily with shaking, the mixture can be used provided that good agitation is maintained in the spray tank.
  - (c) If separation of the mixture occurs and agitation does not correct this problem, a compatibility agent is needed.
6. If the need for a compatibility agent is demonstrated, the following procedure is recommended: Using a clean quart jar, repeat step 1 above and add one-half teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3 and 4. If separation or precipitation occurs with the compatibility agent, do not use this product with that specific liquid fertilizer.

#### GROUND APPLICATION (BAND)

Uniformly apply the broadcast equivalent rate and volume per acre. To determine these:

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Rate per Acre} = \text{Band Rate per Acre}$$

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Volume per Acre} = \text{Band Volume per Acre}$$

#### GROUND APPLICATION (DRY BULK FERTILIZER)

Apply this product/dry bulk fertilizer mixtures with ground equipment only. **Do not** impregnate this product onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with this product. A minimum of 200 pounds of impregnated dry bulk fertilizer excluding the weight of ammonium nitrate or limestone must be applied per acre.

Use the following formula to determine the amount of this product (in quarts) to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

$$\frac{2000}{\text{Lbs. of Dry Fertilizer}} \times \text{Quarts of This Product (Specified Rate per Acre)} = \text{Quarts of This Product per Ton of Fertilizer}$$

To impregnate this product on bulk fertilizer, use a closed rotary drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of this product onto the fertilizer during mixing.

Apply this product/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. This product/dry bulk fertilizer mixture must be spread uniformly on the soil surface.

#### CHEMIGATION APPLICATION (VIA SPRINKLER IRRIGATION SYSTEMS)

This product may be applied as a chemigation treatment through sprinkler irrigation systems. Refer to "CROPS" section for individual crops.

Do not apply this product via chemigation to crops unless specified in the "CROPS" section.

Apply this product **ONLY** through a sprinkler irrigation system of the following type: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move. Do not apply this product through any other type of sprinkler irrigation system.

Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness or illegal pesticide residues in the crop. If you have any questions about calibration, contact your state extension service specialists, equipment manufacturers or other experts.

The system must be properly calibrated (with water only) to ensure that the amount of this product applied corresponds to the specified rate. Apply this product in one-half to three-fourths inches of water during the first sprinkler set (use at least 1 inch of water in the states of New Mexico, Oklahoma and Texas). Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.

### Instructions for Low Volume Micro Sprinklers

Output of low volume sprinkler equals 4 to 50 gallons per hour (gph) per emitter. Point of application must be above ground. Irrigation system should run a sufficient amount of time prior to injection of this product to have all emitters functioning properly. After system is operating properly, length of injection should be such that at one period of time during the injection, the first and last emitters in the system contain water treated with this product. Add this product to the supply tank already filled with the volume of water required for the injection period. Maintain proper agitation in the injection tank containing this product. Mix this product in clean water and inject down-line from filters. Following injection of this product, flush the system for a period of time sufficient to clear the line of this product. (If application of this product is made during a normal irrigation cycle, make the injection during the last stage.)

### Calibration of Low Volume Micro Sprinklers

Calculation of use rate is based on wetted area around emitters, **not** on tree acres. To determine the correct amount of this product, use the following formula:

1. Treated area per each emitter = A  
 $A = 3.14 \times (\text{radius} \times \text{radius})$
2. The area in square feet wet in each acre = B  
 $B = \frac{A \times \text{Emitters/Acre}}{144}$
3. The total area (sq. ft.) wet by your system = C  
 $C = B \times \text{Acres covered by system}$
4. Rate per treated acre of this product (based on length of control desired) = R

$$\text{Amount of This Product to Inject (S)} = \frac{C}{43,560} \times R = \text{Quarts of This Product}$$

#### Example:

If the average distance from emitter to perimeter of wetted area measured 1 inch below soil surface is 13 inches, then:

$$A = 3.14 \times (13" \times 13") \text{ and } A = 530.7 \text{ sq. in.}$$

If there are 300 emitters per acre, then:

$$B = \frac{530.7 \times 300}{144} \text{ and } B = 1105.6 \text{ sq. ft. wetted per acre}$$

If the system covers 20 acres, then:

$$C = 1105.6 \text{ sq. ft.} \times 20 \text{ acres and } C = 22,112 \text{ sq. ft. wetted by the system}$$

If the desired application rate per treated acre is 2.4 quarts of this product, then:

$$S = \frac{22,112}{43,560} \times 2.4 \text{ and } S = 1.2 \text{ quarts of this product have to be injected into the system}$$

### Special Restrictions For Chemigation

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
3. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.



4. The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. It must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. In addition, systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
6. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

#### **Chemigation Systems Connected to Public Water Systems**

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section *"Special Restrictions for Chemigation"*.

#### **CHEMIGATION APPLICATION (VIA FLOODED BASIN IRRIGATION SYSTEMS)**

This product may be applied via flooded basin irrigation systems, but only to the following crops: Bearing and Nonbearing Fruit and Nut trees and Nonbearing vineyards.

#### **Use Instructions and Restrictions for Flooded Basin Irrigation**

1. This product may be applied through flooded basin irrigation systems designed to uniformly distribute irrigation water along the soil surface. Solid set systems utilizing tall riser for overhead application are excluded.
2. Follow all label directions for this product regarding rates per acre, timing of application and crop specific use restrictions.
3. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
4. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.
5. Mix this product with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.
6. Recirculate tail water (runoff water) from flood irrigation that contains this product and contain in the field of initial application or use only on adjacent tree or vine crops for which this product is registered for this type of application.
7. Systems using a gravity-flow pesticide dispensing system must meter the pesticide in the water at the head of the field downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow water.
8. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - The system must contain a functional check valve, vacuum-relief valve and low-pressure drain appropriately located in the irrigation pipe to prevent water source contamination from backflow.
  - The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent flow of fluids back towards the injection pump.
  - The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - The system must contain a functional interlocking control to automatically shut off the pesticide injection pump when the water pump stops.
  - The irrigation pipe or water pump must include a functional pressure switch, which will stop the pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  - Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) of effective design and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
  - Any alternative to the above safety devices must conform to the list of EPA-approved alternative devices.



9. Be sure to regularly measure the flow in the field to ensure the correct amount of this product is being metered into the irrigation water and also regularly monitor to ensure that treated water is being uniformly distributed across the field. Flow rates through metering devices and distribution of this product can vary with water temperature and speed of water flow across the field.
10. Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.
11. If you have questions about calibration, contact your state extension service specialists, equipment manufacturers or other experts.

## SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator and grower are responsible for considering all these factors when making decisions. It is the responsibility of the applicator to avoid spray drift onto non-target areas.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

1. The distance of the outermost nozzles on the boom must not exceed three-fourths the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the following spray drift reduction advisory information.

### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see *"Wind"*, *"Temperature and Humidity"* and *"Temperature Inversions"*).

### Controlling Droplet Size

**Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** - Orienting nozzles so that the spray released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

**Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles. Solid or straight-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### Boom Length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

### Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### Swath Adjustment

When applications are made with crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.)

### Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### Sensitive Areas

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species or non-target crops or plants) is minimal (e.g., when wind is blowing away from the sensitive areas).

### ADDITIVES

Spray adjuvants have little or no influence on performance of this product when applications are made prior to weed emergence. However, several tank-mixes with this product require adjuvants to improve burndown of emerged weeds. Therefore, surfactants, liquid fertilizer (28%, 30% or 32% UAN (urea ammonium nitrate) or ammonium sulfate) or crop oil concentrate may be used with this product tank mixed applied pre-plant, pre-emergence or early post-emergence to the crop. Follow the adjuvant directions for use on the label of the tank-mix partner.

### TANK-MIXING INFORMATION

This product may be applied in a tank-mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to this product.

When using tank-mixtures or sequential applications with this product, always read the companion product label(s) to determine the specific use rate by soil types, weed species and weed or crop growth stage. In addition, follow all use precautions and restrictions including state and local use restrictions that may apply to specific product(s). Always follow the most restrictive label.

### Tank-Mixture With Other Product(s)

If this product is used in combination with any other product(s) except as specifically directed in writing by Manufacturer, then Manufacturer shall have no liability for any loss, damage or injury arising out of its use in any such combination not specifically directed. If used in combination directed by Manufacturer, the liability of Manufacturer shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the product in such combination use and in any event shall be limited to return of the amount of the purchase price of the product. Always perform a mixing test to check the compatibility of this product with all potential tank-mix partners.

### Mixing Instructions

1. Fill tank one-half to three-fourths full with clean or liquid fertilizer and agitate. Prior to mixing this product or tank-mixtures of this product in liquid fertilizer, refer to appropriate label sections for use in liquid fertilizer, application instructions and compatibility determinations.

**Note:** This product will not mix in high salt formulation fertilizers such as 10-34-0. When utilizing high salt formulation fertilizers as the spray carrier, use one of the following:

- a) Pre-slurry this product in water prior to adding to the tank. Use 1:1 ratio of water to this product.
- b) Add water to fertilizer solution prior to adding this product. The amount of water should be equal or greater than the amount of this product to be used.

2. This Product Alone

When using this product alone, add this product to partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

3. This Product in Tank-Mixture

Add the tank-mixture products in the order listed below prior to adding this product. For tank-mixtures with 2,4-DB, paraquat or glyphosate, see mixing instructions at the end of this section.

- a) Wettable Powder (WP) formulations - Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations - Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.

- c) Flowable (SC) formulations: Add the SC formulation to the partially filled tank while agitating.
  - d) Water Soluble Concentrate (WSC) formulations: Add the WSC formulation to the partially filled tank while agitating.
  - e) Emulsifiable Concentrate (EC) formulations: Add the EC formulation to the partially filled tank while agitating. After complete mixing, add this product to the tank.
  - f) **Note:** For tank-mixes including 2,4-DB, paraquat or glyphosate: After complete mixing of this product, continue filling the sprayer with water and add 2,4-DB or paraquat or glyphosate near the end of the filling process. If paraquat is included in the tank-mixture, add 8 fluid ounces of nonionic surfactant per 100 gallons of total spray mixture as the last ingredient in the tank.
- Fill the remainder of the tank with water or liquid fertilizer while agitating.
4. Thorough and continuous sprayer-tank agitation must be maintained during mixing and spraying of this product. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to re-suspend the mixture before spraying is resumed.
- Continue agitation while spraying.

## CLEANING SPRAY EQUIPMENT

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacturer's directions and then triple rinsing the equipment before and after applying this product.

## USE RESTRICTIONS

- Do not exceed the maximum labeled rate for any soil type.
- In the event of a crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted the same year without adverse effects (see "CROPS" section for exceptions). If replanting is necessary, do not work the soil deeper than the treated zone.
- Refer to the "CROPS" section for crop specific pre-harvest intervals (PHI) and feeding and grazing restrictions.

## CROP ROTATION

- Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations. However, various environmental and agronomic factors such as arid conditions make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Soil characteristics and environmental conditions which may contribute to crop stress that may be accentuated by the use of this product include: coarse soils, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought and heavy rainfall soon after application.
- When this product is used in tank-mix or sequential combinations, refer to label(s) of other herbicide(s) for additional rotational crop restrictions.
- Restrictions for rotational cropping after the use of this product are dependent on the application use rate of this product in the primary crop. Read the following restrictions to determine the rotational crops for their specific situation according to application use rate.

## CROP ROTATION RESTRICTIONS AND LIMITATIONS

### Rotational Crop Restrictions Following Applications of This Product to Field and Row Crops

#### 1. Application Rate $\leq$ 2.4 Quarts ( $\leq$ 2 lbs. a.i.) per Acre

##### a) Crops which are labeled for pre-plant incorporated application:

These crops may be planted the same season in which this product was applied.

##### b) Sugar beets, Red beets and Spinach:

To avoid crop injury, do not plant Sugar beets, Red beets or Spinach for 12 months following a Spring application of this product or 14 months following a Fall application of this product.

Do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a crop.

To ensure thorough mixing of soil prior to planting Sugar beets, Red beets and Spinach, plow the land using a moldboard plow to a depth of 12 inches.

##### c) Proso millet, Sorghum (Milo) and Annual or Perennial grass crops or Mixtures:

Do not plant Proso millet, Sorghum (Milo) and Annual or Perennial grass crops or mixtures for 10 months after a Spring application of this product or 12 months after a Fall application of this product except in the following conditions:

- In the states of Minnesota, North Dakota and South Dakota: Do not plant these crops for 18 months following a Spring application of this product or 21 months following a Fall application of this product.
- To avoid the possibility of crop injury in areas that receive less than 20 inches of rainfall or irrigation to produce a crop, do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a field or row crop.

##### d) Wheat and Barley:

Wheat and barley may be planted 4 months after an application of this product except under the following conditions:



- If less than 12 inches of rainfall or overhead irrigation was received between application and rotational crop planting, do not plant Wheat before 12 months after a Spring application of this product or 14 months after a Fall application of this product.
  - In dryland areas and/or areas where irrigation is necessary to produce the crop treated with this product, do not plant Winter wheat or Barley as a follow crop if crop failure/destruction occurs and land is fallowed during the Summer.
- e) All Other Rotational Crops Not Specifically Addressed Above:**  
Crops other than those to which this product may be applied as a pre-plant incorporated treatment may be planted the year following application of this product except under the following condition:
- If rainfall or irrigation was not sufficient to produce a crop, delay planting for 18 months following a Spring application of this product or 20 months following a Fall application of this product.
- 2. Application Rate > 2.4 Quarts (> 2 lbs. a.i.) per Acre**  
In the growing season following application of this product to field and row crops at greater than 2.4 quarts per acre, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur. Do not plant other crops for 24 months.

### Rotational Crop Restrictions Following Applications of This Product to Grove, Orchard and Vineyard Crops

In the growing season following application of this product to bearing Fruit and Nut trees, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur. Do not rotate to other crops (except for Fruit trees, Grapes or Nut crops) for 24 months following an application of this product to bearing Fruit or Nut trees.

### USE AREA



### CROPS

**Disclaimer:** The use of this product may result in crop injury, loss or damage including but not limited to agronomic, cultural, mechanical and environmental. Numerous risks of loss or damage to certain crops may be associated with the use of this product even when directions for use are completely followed. The user or grower should take all such risks into consideration before deciding to apply the product.

Drexel recommends testing on a small portion of the target crop to determine if damage is likely to occur. Each grower who is considering the product for such use should test this product in order to determine its suitability. A grower should only use this product to the extent that in his sole opinion, the benefit of use of this product outweighs the potential injury to the grower's crop.

In addition, many factors can affect crop growth and/or yield including but not limited to insects, diseases, weed competition, poor seed quality, improper planting depth, mechanical cultivation, poor weather (such as freezing or excessive wind, rain heat or cold), lack of excessive moisture, crusting, fertility or hardpans. Risk of loss or damage to crops may be associated with the use of this product and contribute to poor stands due to failure of crop to emerge, swelling of roots or other below ground plant parts, less vigorous plant growth and development and reduction in yield potential.

### BEARING FRUIT AND NUT TREES

This product may be applied in the following individual crops within the Fruit tree and Tree nut crop groupings:

| CITRUS FRUIT CROP GROUPING |                      |                      |
|----------------------------|----------------------|----------------------|
| Calamondin                 | Kumquat              | Orange (Sour, Sweet) |
| Citrus citron              | Lemon                | Pummelo              |
| Citrus hybrids             | Lime                 | Satsuma mandarin     |
| Grapefruit                 | Mandarin (Tangerine) | Tangelo              |



| POME FRUITS CROP GROUPING     |                                   |        |
|-------------------------------|-----------------------------------|--------|
| Apples<br>Crabapple<br>Loquat | Mayhaw<br>Pear<br>Pear (Oriental) | Quince |

| STONE FRUITS CROP GROUPING                               |   |                 |
|--|---|-----------------|
| Apricot<br>Aprium<br>Cherries (Sweet, Tart)<br>Nectarine | Peach<br>Plum<br>Plum (Chickasaw, Damson,<br>Japanese)<br>Plumcot | Pluot<br>Prunes |

| OTHER FRUIT TREES |           |
|-------------------|-----------|
| Pomegranate       | Juneberry |

| TREE NUTS CROP GROUPING                                  |  |                              |
|--|--|------------------------------|
| Almond<br>Beech nut<br>Brazil nut<br>Butternut<br>Cashew | Chestnut<br>Chinquapin<br>Filbert (Hazelnut)<br>Hickory nut<br>Macadamia nut | Pecan<br>Pistachio<br>Walnut |

#### Methods of Application, Timing and Rates

- Apply this product by ground, chemigation or flooded basin irrigation systems.
- Apply this product either in a single application or sequentially with an interval of 30 days or more.
- Apply this product at the rate of 2.4 to 4.8 quarts per acre depending on desired length of control (see below table) per application.

#### Use Rates:

|                    |                   |
|--------------------|-------------------|
| Short-term control | 2.4 qts. per acre |
| Long-term control  | 4.8 qts. per acre |

**Ground Applications:** This product may be applied surface-incorporated or surface pre-emergence. Apply this product as a broadcast or banded treatment using ground equipment before weed emergence. Apply the spray directly to the ground beneath the trees and/or in areas between rows. Do not apply over the top of trees with leaves or buds or fruit. Contact by the spray mixture with leaves, shoots, or buds may cause injury.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the "APPLICATION INSTRUCTIONS" section. Do not apply irrigation water treated with this product over top of trees with leaves or buds or fruits. Contact with leaves, shoots or buds by spray mixture may cause injury.

**Flooded Basin Irrigation Systems:** This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flood basin found in the "APPLICATION INSTRUCTIONS" section.

#### Use Restrictions on Bearing Fruit and Nut Trees

- Do not apply by air.
- Do not apply to newly seeded nursery stock.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.2 quarts of this product per acre per year in Citrus and Nut trees.
- Do not apply within 1 day of harvest of Citrus fruit.
- Do not apply within 60 days of harvest of Pome and Stone fruits or other Tree fruits.
- Do not apply within 60 days of harvest of nuts except Almonds.
- Do not apply within 120 days of harvest of Almonds.
- Do not feed forage or graze livestock in treated groves or orchards.

## **CARROTS**

### **Methods of Application, Timing and Rates**

Apply this product by ground, air or chemigation.

**Pre-emergence Applications:** Make a single broadcast application by ground or air or by chemigation using 1.2 quarts of this product per acre as a post-plant treatment prior to emergence of the crop and before weed emergence. Apply a pre-emergence treatment within 2 days after planting.

**Layby:** This product may be applied only by ground equipment at layby (last mechanical cultivation) at 1 quart per acre as a directed spray to the soil between rows. Apply this product prior to weed emergence. Emerged weeds will not be controlled by this treatment. Do not allow the spray to contact Carrot plants or injury may occur. Do not apply layby applications by chemigation or by air.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the "APPLICATION INSTRUCTIONS" section.

Do not allow irrigation water treated with this product to contact Carrot plants. Do not apply tank-mixtures through any type of irrigation system unless the label instructions on chemigation of all products are followed.

### **Use Restrictions on Carrots**

- Do not apply more than 1.2 quarts of this product per acre per season.
- Do not apply within 60 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply layby applications by chemigation or by air.

## **CARROTS GROWN FOR SEED PRODUCTION**

### **Methods of Application, Timing and Rates**

Apply this product only by layby.

**Last Cultivation (Layby):** Apply this product following the last mechanical cultivation (layby) at the rate of 0.6 to 2.4 quarts of this product per acre (on a broadcast basis). Uniformly apply as directed spray to the soil between rows. Do not allow the spray to contact Carrot plants or injury may occur. Use protective shields to avoid contact with Carrot foliage. Use properly calibrated and accurate nozzles and equipment.

Layby applications can be applied to Carrots previously treated with herbicide(s) registered in/on Carrots. Consult the label(s) of the herbicide(s) for directions for use, rates to be used and precautions or restrictions for use in Carrots and for rotational crops.

### **Use Restrictions on Carrots Grown For Seed Production**

- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply layby applications by chemigation or by air.
- Do not apply within 60 days of Carrot seed harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not harvest Carrots for food or feed use.

### **Special Use Restrictions on Carrots Grown For Seed Production**

The pesticide applicator, the producer of the crop and the seed conditioner must be aware that use of this product according to this labeling is deemed a non-feed/non-food use. If the applicator of this pesticide is not the producer, the applicator should provide a copy of this labeling to the producer of the crop. Producers of this crop who use this product or cause the product to be used on a field they operate, should provide a copy of this pesticide label to the seed conditioner.

Consequently, no portion of this Carrot seed crop, including but not limited to green chop, hay, pellets, meal, whole seed, cracked seed, roots, bulbs, foliage and seed screenings, may be used or distributed for food or feed purposes.

Processed Carrot seed from a field treated with this product must bear a specific tag or conspicuous container labeling or if shipped in bulk, on the shipment invoice or bill of lading, with the following statement: "Not for human consumption or animal feed." All seed screenings from seed processing shall be disposed of in such a manner that the screenings cannot be distributed or used for human food or animal feed purposes. The seed conditioner shall keep records of screening disposal for 3 years from the date of disposal and shall furnish the records immediately upon request. Conditioner disposal records shall consist of documentation of on-farm disposal, disposal at a controlled dumpsite, incinerator, composter or other equivalent disposal site and shall include the lot numbers, amount of material disposed of, the grower(s) and the date of disposal.

## CORN (Field, Pop, Seed, Sweet)

### Additional Weeds Controlled

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Corn with CULTI-SPRAY application: Wild proso millet and Shattercane.

### Methods of Application, Timing and Rates

- Apply this product ground, air or chemigation.
- Apply this product in conventional, minimum or no-till as a pre-emergence, post-emergence or post-emergence incorporated (CULTI-SPRAY) application in Field corn.
- Apply this product in conventional tillage as a pre-emergence or post-emergence application in Pop corn, Seed corn or Sweet corn.

**Note: Regardless of tillage system, plant Corn at least 1.5 inches deep and completely cover with soil.**

In conventional tillage systems, plant into a seedbed that is firm and free of clods and trash. Use only where adequate tillage is practiced to provide good soil coverage of the Corn seed.

In no-till systems, utilize a no-till planter that is capable of planting through crop residue. The use of no-till planters under conditions that do not allow good soil coverage of the Corn seed can result in reduced crop stand or injury if this product contacts the germinating Corn seed. Check equipment to ensure good seed coverage.

Treatments of this product alone or this product in tank-mix combination(s) are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. If cultivation is necessary because of soil crusting or weed germination, use shallow tillage and make certain that Corn seeds are below the tilled area.

**Pre-emergence:** Apply this product after planting but before weeds and crop emerge.

**Post-emergence:** Apply this product post-emergence until Field corn is 30 inches tall (20 to 24 inches tall for Pop, Seed and Sweet corn) or in the V8 growth stage, whichever is more restrictive. If the Corn canopy prevents applications from reaching the soil, use drop nozzles and apply as directed spray.

**Culti-Spray:** Apply this product alone or this product plus atrazine when Field corn is at least 4 inches tall until last cultivation (layby). This product plus atrazine must be applied before Field corn reach 12 inches in height. Observe the maximum allowable rates for atrazine on the atrazine label.

Under situations of low rainfall or soil moisture when deep germinating weeds such as Shattercane or Field sandbur are anticipated, mechanical incorporation will provide best results. If cultivation is needed after application and incorporation of this product, the depth of cut should be no deeper than the depth of cut used to incorporate.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the "APPLICATION INSTRUCTIONS" section.

### Use Rates:

| Pre-Emergence or Post-Emergence Applications |                       |                          |                     |
|--|-----------------------|--------------------------|---------------------|
| Soil Texture                                 | Organic Matter        |                          |                     |
|  | < 1.5%<br>(Qts./Acre) | 1.5 to 3%<br>(Qts./Acre) | > 3%<br>(Qts./Acre) |
| Coarse                                       | 0.9 to 1.2            | 1.2 to 1.8               | 1.8                 |
| Medium                                       | 1.2 to 1.8            | 1.8                      | 1.8 to 2.4          |
| Fine   | 1.2 to 1.8            | 1.8 to 2.4               | 1.8 to 2.4          |

| Culti-Spray Applications - Field Corn Only |                  |                  |
|--|------------------|------------------|
| Soil Texture                               | Southern States* | Northern States* |
|  | (Qts./Acre)      | (Qts./Acre)      |
| Coarse                                     | 0.6 to 0.9       | 0.9 to 1.2       |
| Medium                                     | 0.9 to 1.2       | 1.2 to 1.8       |
| Fine                                       | 0.9 to 1.8       | 1.2 to 1.8       |

\*See map for specific States in the "USE AREA" section.

### Use Restrictions on Corn

- Do not apply this product in reduced, minimum or no-till Sweet corn, Seed corn or Pop corn.
- Do not apply this product in no-till in California.
- Do not apply this product pre-plant incorporated.
- Do not apply this product post-emergence in liquid fertilizer.

- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Corn after 21 days following application.

## COTTON

### Additional Weeds Suppressed

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will suppress Russian thistle in the state of Arizona.

### Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation in conventional, minimum, stale seedbed or no-till.
- Apply this product as a pre-plant surface, pre-plant incorporated, pre-emergence or layby application in Cotton.  
Pre-plant surface, pre-emergence and layby treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. A shallow cultivation is recommended if soil crusting or soil compaction occurs. If weeds begin to germinate or adequate moisture is not received within 7 days after application, use shallow tillage (rotary hoe or light harrow) and make sure Cotton seeds are below tilled area. The use of a post-emergence herbicide treatment may be required to control weed escapes at planting or following Cotton emergence.

**Pre-plant Surface:** Apply this product up to 15 days prior to planting. Apply tank-mixes of this product and sequential programs as specified under the "TANK-MIXING INFORMATION" section.

**Pre-plant Incorporated:** Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Apply tank-mixes of this product and sequential programs as specified under the "TANK-MIXING INFORMATION" section.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply tank-mixes of this product and sequential programs as specified under the "TANK-MIXING INFORMATION" section.

**Pre-plant Incorporated Followed by Pre-emergence Applications:** Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Make overlay application of this product at planting or up to 2 days after planting. Total amount of this product applied per acre cannot exceed the highest labeled rate for a given soil type. Pre-plant incorporated and pre-emergence applications of this product may be applied with the labeled tank-mix herbicide(s).

**Layby Application (At last cultivation):** Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (layby). Layby applications can be applied in Cotton previously treated with this product or any herbicide(s) registered for use in Cotton. Consult the labels of those herbicide(s) for use directions, rates to be used, precautions or restrictions for use in Cotton and restrictions for rotational crops. The total amount of this product applied per acre per season cannot exceed the highest labeled rate for a given soil type.

Do not apply as a broadcast spray over the top of Cotton or serious crop injury can result. Avoid contact of spray to the non-woody portion of Cotton stems and to Cotton foliage or serious crop injury can result. To reduce the potential for crop injury caused by herbicide contact with Cotton foliage and stems, use protective shields when conditions favor spray drift.

Glyphosate-containing products may be applied with this product at layby in Cotton with the glyphosate tolerant gene. DO NOT apply glyphosate-containing products at layby on non-glyphosate tolerant Cotton. Do not apply this product and glyphosate tank-mix as a broadcast spray over the top of Cotton or crop injury may result.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**Fall Application:** This product may be applied to control weeds in Cotton in the Fall after October 15 (up to 140 days prior to planting Cotton) in Arizona, California, Louisiana, Mississippi, New Mexico, Oklahoma and Texas. Apply this product at the broadcast rate of 1.2 quarts per acre on coarse or medium soils and 1.8 quarts per acre on fine soils.

### Use Rates:

| Soil Texture | Conventional or Minimal Tillage<br>(Qts./Acre) | No-Till**<br>(Qts./Acre) |
|--------------|--|--------------------------|
| Coarse       | 0.6 to 1.2*                                    | 0.9 to 1.2               |
| Medium       | 0.9 to 1.2                                     | 1.2 to 1.8               |
| Fine         | 1.2 to 1.8                                     | 1.8 to 2.4               |

\*Do not exceed 0.9 quart per acre on coarse textured soils in California.  
 \*\*Not for use on soils with more than 3% organic matter.



### Use Restrictions on Cotton

- Do not apply this product in no-till in California.
- Pre-harvest interval (PHI) is 60 days between last application of this product and Cotton harvest.
- Do not exceed the highest seasonal rate of this product per acre for any given soil type as specified in the "Use Rates" table.
- Do not feed forage or graze livestock in treated Cotton fields.

### EDIBLE BEANS [Chickpeas (Garbanzo Beans), Dry, Lima, Snap, Southern Peas (Cowpeas) and Sweet Lupine]

#### Methods of Application, Timing and Rates

- Apply this product in the Fall pre-plant surface or pre-plant incorporated in Chickpeas (Garbanzo beans), Dry beans, Lima beans, Snap beans and Southern peas (Cowpeas).
- Apply this product in the Fall pre-plant surface or pre-plant incorporated or pre-emergence in Sweet lupines.

**Pre-plant Incorporated:** Apply up to 60 days prior to planting and incorporate within 7 days of application.

**Pre-emergence:** Apply only to Sweet lupines at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods.

#### Use Rates:

| Soil Texture | Southern States*<br>(Qts./Acre) | Northern States*                   |                                    |
|--------------|---------------------------------|------------------------------------|------------------------------------|
|              |                                 | ≤ 3% Organic Matter<br>(Qts./Acre) | > 3% Organic Matter<br>(Qts./Acre) |
| Coarse       | 0.9                             | 1.2                                | 1.2                                |
| Medium       | 1.2                             | 1.5                                | 1.8                                |
| Fine         | 1.8                             | 1.8                                | 1.8                                |

\*See map for specific States in the "USE AREA" section.

**Fall Applications:** Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Edible beans [Chickpeas (Garbanzo beans)], Dry beans (such as Black turtle, Cranberry, Great northern, Navy, Red kidney and Small white type), Lima beans, Snap beans, Southern peas (Cowpeas) and Sweet lupines the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes.

DO NOT apply when air temperature is below 45°F.

**Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)**

#### Use Rates:

| Soil Texture | Broadcast Rate<br>(Qts./Acre) |                     |
|--------------|-------------------------------|---------------------|
|              | ≤ 3% Organic Matter           | > 3% Organic Matter |
| Coarse       | 0.6 to 1.2                    | 1.2                 |
| Medium       | 0.9 to 1.5                    | 1.5 to 1.8          |
| Fine         | 1.2 to 1.8                    | 1.8                 |

### Use Restrictions on Edible Beans

- Do not apply this product more than once per cropping season.
- Do not apply in any type of irrigation system.
- Do not feed Lupine hay and forage or graze livestock in treated Lupine fields.

### FORAGE LEGUMES

This product may be used in Forage legumes used as a cover crop in the Federal set-aside or Conservation Reserve Program (CRP) areas.

Some stand reduction of the Legume cover crops may occur with this use. Consult local county extension service or the local ASC committee for recommended cover crops.

If loss of cover crop occurs due to adverse weather conditions, any crop registered for pre-plant incorporated use of this product can be replanted the same year into the soil treated with this product without adverse effects. If replanting is necessary, do not rework the soil deeper than the zone treated with this product. Do not feed or graze legume cover crops established following application of this product.

Destroy ultimately the cover crop residue by tillage or by leaving on the surface to retard erosion or as directed by the local ASC committee.

### Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or pre-emergence for weed control in Legume cover crops.

#### Use Rates:

| Pre-Plant Incorporated or Pre-Emergence |                            |
|---|----------------------------|
| Soil Texture                            | Broadcast Rate (Qts./Acre) |
| Coarse                                  | 0.6 to 0.9                 |
| Medium                                  | 0.9 to 1.2                 |
| Fine                                    | 1.2 to 1.5                 |

## FRUITING VEGETABLES

This product may be applied to the following fruiting vegetables: Eggplant, Groundcherry (*Physalis* spp.), Pepper (includes Bell, Chili, Cooking, Pimento, Sweet), Pepino, Tomatillo, Tomato

### Methods of Application, Timing and Rates

- Apply this product uniformly by ground or air only.
- Apply this product as a broadcast pre-plant incorporated or as a broadcast pre-plant surface prior to transplanting fruiting vegetables or as a post-directed application to transplanted or established direct-seeded fruiting vegetables.

Do not apply prior to direct-seeded fruiting vegetables. Do not apply post-emergence over the top of or to foliage of fruiting vegetables as severe injury may occur.

This product can be applied as a post-directed spray on the soil at the base of the plant, beneath the plants and between rows. Avoid direct contact with foliage or stems. Be sure roots of transplants are established. Following the post-directed spray and when sufficient rainfall or irrigation does not occur to activate the herbicide, mechanically incorporate at the time of blocking and thinning or at "layby." Apply this product prior to weed emergence. Emerged weed will not be controlled by this treatment.

#### Use Rates:

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.6 to 0.9                 |
| Medium       | 0.9 to 1.2                 |
| Fine         | 0.9 to 1.8                 |

### Use Restrictions on Fruiting Vegetables

- Do not apply more than 1.8 quarts of this product per acre per season.
- Do not apply within 70 days of harvest.
- Do not allow the soil treated with this product to come in contact with transplant area.
- Do not apply if row is to be covered later with plastic.

## GARLIC

### Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

**Pre-emergence:** Apply after planting but before crop and weeds emerge.

**Post-emergence:** Apply at the 1st to 5th true-leaf growth stage.

**Split Applications:** Apply at both pre-emergence and post-emergence timings.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage in California). Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**Use Rates:**

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2                        |
| Fine         | 1.8                        |

**Use Restrictions on Garlic**

- Do not exceed 1.8 quarts of this product per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts of this product per acre per crop for Dodder control.
- Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.

**GRAIN SORGHUM****Additional Weeds Controlled**

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Grain sorghum as a CULTI-SPRAY application: Wild proso millet and Shattercane.

**Methods of Application, Timing and Rates**

- Apply this product uniformly in water by ground equipment or by aircraft.
- Apply this product as a post-emergence incorporated (CULTI-SPRAY) in Grain sorghum in all states.
- Apply this product early post-emergence in Grain sorghum grown in states east of the Mississippi River and in Arkansas, Eastern Texas, Louisiana and the Missouri "bootheel".

**Culti-Spray:** Treatments of this product can be applied from the 4-inch growth stage to as late as the last cultivation (layby) of Grain sorghum. See specific directions for CULTI-SPRAY application under the "TIMING OF APPLICATION" section.

**Early Post-emergence:** For use only in states east of the Mississippi River plus Arkansas, eastern Texas, Louisiana and the "bootheel" of Missouri. The seedbed should be firm and free of clods and trash. Use only where adequate tillage is practiced to provide good seed coverage. Plant Grain sorghum at least 1.5 inches deep to ensure good seed coverage.

**Use Rates:**

| Soil Texture | Culti-Spray Application         |                                 |
|--------------|---------------------------------|---------------------------------|
|              | Southern States*<br>(Qts./Acre) | Northern States*<br>(Qts./Acre) |
| Coarse       | 0.9                             | 1.2                             |
| Medium       | 1.2                             | 1.8                             |
| Fine         | 1.8                             | 1.8                             |

\*See map for specific States in the "USE AREA" section.

| Early Post-Emergence Application |                          |
|----------------------------------|--------------------------|
| Soil Texture                     | This Product (Qts./Acre) |
| Coarse                           | DO NOT USE               |
| Medium, Fine                     | 1.2                      |

**Use Restrictions on Grain Sorghum**

- Do not apply this product pre-plant incorporated or pre-emergence as serious crop injury can result.
- Do not apply this product in Grain sorghum more than once per crop season.
- Do not apply this product as a CULTI-SPRAY treatment in Grain sorghum planted in double row beds.
- Do not replant Grain sorghum if crop loss occurs.
- Do not apply in liquid fertilizer.
- Livestock can graze or be fed forage from Grain sorghum fields treated by this product after 21 days following application.

**GREEN ONIONS (Green Eschalots or Green Shallots, Japanese Bunching Onions, Leeks, Scallions or Spring Onions)****Methods of Application, Timing and Rates**

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

**Pre-emergence or Post-emergence:** Uniformly apply 1.2 quarts of this product per acre as a broadcast spray to the soil surface as pre-emergence spray or as a post-emergence spray to the crop at the 2 to 3 true-leaf stage at least 30 days before harvest.

If this product is to be applied sequentially both as a pre-emergence and post-emergence spray, the pre-emergence spray must be applied 30 days prior to the post-emergence spray.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply at 2 to 3 true-leaf stage at least 30 days before harvest. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

#### Use Restrictions on Green Onions

- Do not apply more than 1.2 quarts of this product per acre per application.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Do not apply within 30 days of harvest.
- Do not feed forage or graze livestock in treated fields.

### LENTILS AND PEAS (Dry, Dwarf, Edible Pod, English, Garden, Green, Pigeon) (Except CA)

#### Methods of Application, Timing and Rates

Apply this product pre-plant surface or pre-plant incorporated in Lentils and Peas.

**Pre-plant Incorporated:** Apply this product 60 days prior to planting up to immediately before planting. After application, rotary hoeing and shallow cultivation/tillage can be practiced without reducing weed control. Avoid tillage that will bring untreated soil to the surface.

**Note:** Any crop registered for a pre-plant incorporated application of this product can be double-cropped after Peas.

#### Use Rates:

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2                        |
| Fine         | 1.8                        |

**Fall Applications:** Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity. Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Lentils or Peas (Dry, Dwarf, Edible pod, English, Garden, Green, Pigeon) the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes. DO NOT apply when air temperature is below 45°F.

#### Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)

#### Use Rates:

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.6 to 0.9                 |
| Medium       | 0.9 to 1.2                 |
| Fine         | 1.2 to 1.8                 |

#### Use Restrictions on Lentils and Peas

- Do not use in California.
- Do not use this product pre-emergence in Peas.
- Do not apply this product more than once per cropping season.
- Do not apply to Lentils, Peas, Lentil or Pea forage, Pea silage, Pea hay or Pea straw grown for livestock feed.
- Do not apply in any type of irrigation system.

### MINT (Peppermint, Spearmint)

#### Methods of Application, Timing and Rates

- Apply this product by ground or air.
- Apply this product pre-emergence.

**Pre-emergence:** Make a single broadcast pre-emergence application of this product to Mint using 0.9 to 2.4 quarts of this product per acre depending on soil texture (see table below) to dormant established Mint before weed emergence. After



application of this product, some temporary crop injury may be observed early in the growing season as Mint breaks dormancy and begins to grow.

This product will not cause crop injury when applied according to the label under normal growing conditions.

Non-uniform application may result in injury to crops, poor stands or soil residues. Conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity or drought may weaken seedlings and plants and make them more susceptible to herbicidal damage.

#### Use Rates:

| Soil Texture | Broadcast Rate<br>(Qts./Acre) |
|--------------|-------------------------------|
| Coarse       | 0.9 to 1.2                    |
| Medium       | 1.2 to 2.4                    |
| Fine         | 1.2 to 2.4                    |

#### Use Restrictions on Mint

- Do not apply this product to "baby" Mint in the first year of growth and establishment.
- Do not apply to Mint that has broken dormancy or crop injury may result. Application to Mint that is near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to Mint dormancy break.
- Do not apply to Mint stands that have been weakened by age, disease, cold weather, excessive moisture or other factors that reduce crop vigor. Mint growing under stress is more susceptible to herbicidal damage.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Do not apply within 90 days of harvest.
- Do not allow livestock to graze on treated spent hay or feed treated spent hay to livestock.
- Do not apply this product on Mint through any type of irrigation system.
- Do not use in California except as directed in supplemental labeling.

### NONBEARING FRUIT AND NUT TREES AND NONBEARING VINEYARDS

#### Methods of Application, Timing and Rates

- Apply this product as pre-plant incorporated, pre-plant surface, surface incorporated or pre-emergence weed control in several nonbearing Fruit and Nut trees and nonbearing Vineyards. This product may be used before or after transplanting the following nonbearing crops:

|          |            |           |                  |
|----------|------------|-----------|------------------|
| Almonds  | Grapes     | Peaches   | Prunes           |
| Apples   | Grapefruit | Pears     | Tangelo          |
| Apricots | Lemons     | Pecans    | Tangerine        |
| Cherries | Nectarines | Pistachio | Walnut (English) |
| Citrus   | Oranges    | Plums     |                  |

Apply the spray directly to the ground beneath the trees or vines. Do not apply over the top of trees or vines with leaves or buds. Contacting the leaves, shoots or buds with the spray mixture may cause malformed plant tissues. Do not apply to newly seeded nursery stock.

#### For newly transplanted and 1 year old Grapevines:

- Apply only to dormant Grapevines.
  - Do not apply if buds have started to swell. Application after buds have started to swell may result in leaf distortion.
  - Do not apply to newly transplanted trees or vines until ground has settled and no cracks are present.
- Apply this product by ground, air, chemigation or by flooded basin irrigation systems.
  - Apply this product either in a single application or sequentially with an interval of 30 days or more.
  - Apply this product at 2.4 to 4.8 quarts per acre per application depending on the desired length of control (see "Use Rate" table below) but not to exceed a total of 4.8 quarts per acre per year in Pome, Stone and other Fruit trees, In Citrus, Grapevines and Nut trees, do not exceed a total of 7.3 quarts per acre per year.

**Pre-plant Surface:** Prior to transplanting, apply uniformly with ground or aerial equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Pre-plant Incorporated:** Apply uniformly this product prior to transplanting but before weeds emerge. Incorporate this product to a depth of 1 to 2 inches. Application and incorporation must be made prior to transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

**Pre-emergence (Post-plant):** Applications may be made in a band or broadcast.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section. Do not apply irrigation water treated with this product over the top of trees or vines with leaves or buds.

**Flooded Basin Irrigation Systems:** This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flooded basin irrigation systems under the "APPLICATION INSTRUCTIONS" section.

**Use Rates:**

|                    |                   |
|--------------------|-------------------|
| Short-term control | 2.4 qts. per acre |
| Long-term control  | 4.8 qts. per acre |

**Use Restrictions on Nonbearing Fruit and Nut Trees and Nonbearing Vineyards**

- Do not feed forage or graze livestock in treated fields.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.3 quarts of this product per acre per year in Citrus, Grapevines and Nut trees.

**ONIONS [Direct Seeded and Transplanted Dry Bulb and Shallots (Dry Bulb)]**

**Methods of Application, Timing and Rates**

Apply this product by ground, air or chemigation.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage in California) unless otherwise specified below. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

**MINERAL SOILS**

**Methods of Application, Timing and Rates**

In all states except California, apply this product as a broadcast treatment when Onions or Shallots have 2 to 9 true leaves.

**Use Rates:**

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2                        |
| Fine         | 1.8                        |

**State Specific Instructions:**

**California**

This product may only be applied as a single application when Onions or Shallots have 2 to 6 true leaves.

**Colorado, Kansas and Nebraska**

This product may be applied sequentially in seeded Onions. Apply first application of this product at loop stage. Apply sequential application of this product early post-emergence (2nd to 9th true-leaf stage). Do not exceed the maximum labeled rate for a given soil texture. Do not apply this product at loop stage through the 9th true-leaf stage if heavy rains are expected or severe crop injury may result.

**Colorado and the High Plains of Texas (Transplanted Onions Only)**

Apply and shallow incorporate (less than 2 inches deep) this product into preformed beds prior to transplanting.

**Idaho, Oregon and Washington**

Apply this product as a broadcast treatment when Onions or Shallots are between the flag leaf to 9th true-leaf stage.

This product may be used at 1.8 to 2.4 quarts per acre for Dodder control on medium and fine textured soils. Do not apply this product using chemigation at the Dodder control rate.

This product may be applied in the Fall or Spring to the furrow area of land bedded in the Fall preparation for planting seed of Dry bulb onions the following Spring. Apply this product as a banded application at rates based on appropriate soil texture. Band width should be approximately one-half the width of the row spacing.

Keep away from the area where Onion seed will be planted. Harrow-off tops of beds following furrow applications of this product prior to planting Onions. For selective weed control in the Onion row, apply this product as banded post-emergence to flag leaf Onions at the labeled rates based on soil texture.

Apply this product only once to the furrow area and once to the Onion row as a post-emergence application.

## Michigan

For mineral soils containing greater than 10% organic matter, follow the directions for muck soils (see "Muck Soils").

### Use Restrictions on Mineral Soils

- Do not incorporate mechanically except as specified for use on dry bulb onions in Colorado and the Texas High Plains.
- Do not exceed 1.8 quarts per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts per acre per crop.
- Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of one-half inch of water.

## MUCK SOILS (Except CA)

### Methods of Application, Timing and Rates

Apply this product sequentially on muck soils as follows:

| Time of Application and Growth Stage              | Rate (Qts./Acre) |
|---|------------------|
| Pre-emergence through loop stage                  | 2.4              |
| Early post-emergence (2nd to 6th true-leaf stage) | 2.4              |
| Late post-emergence (6th to 9th true-leaf stage)  | 2.4              |

### Use Restrictions on Muck Soils

- Do not apply to muck soils in California.
- Do not apply within 45 days of harvest.
- Do not feed or graze these crops.
- Do not apply more than 7.2 quarts of this product per acre per growing season on muck soils. To maximize crop safety, ensure good soil coverage during planting or transplanting and delay pre-emergence applications to the loop stage, if possible.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of one-half inch of water.
- Do not plant Spinach, Sugar beets, Red beets, Winter barley or Winter wheat as rotational crops on muck soils for 12 months from the time of last application if more than 1.8 quarts of this product per acre is applied to the Onion crop.
- If loss of Onion crop occurs, do not replant any crop other than Onions in muck soil during the same cropping year and do not work the soil deeper than 2 inches.

## PEANUTS (Except CA)

### Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-plant incorporated.
- Apply this product pre-emergence to Peanuts grown under overhead irrigation.

**Pre-plant Incorporated:** Apply this product up to 60 days prior to planting and incorporate within 7 days after applications.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting and before crop emergence. To prevent decreased crop pegging, adequate incorporation must be achieved by applying a minimum of three-fourths inch of overhead irrigation or rainfall within 48 hours of application.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

### Use Rates:

| Region   | Rate (Qts./Acre) |
|--|------------------|
| New Mexico, Oklahoma and Texas   | 0.6 to 1.2       |
| Other Peanut growing states*   | 1.2              |
| *For heavy weed infestations especially <i>Texas panicum</i> , up to 1.8 quarts of this product per acre can be used in Alabama, Georgia or Florida. |                  |

## POTATOES

### Additional Weeds Controlled

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Potatoes: Stinging nettle.

### Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, pre-emergence incorporated or early post-emergence.

**Pre-emergence:** Apply this product after planting but before Potatoes and weeds emerge or after drag-off.

**Pre-emergence Incorporated:** Apply this product and incorporate after planting but before Potatoes and weeds emerge. Where drag-off is practiced, apply this product and incorporate before, at, or after drag-off but before Potatoes and weeds emerge. Incorporate this product within 7 days of application. This product must be thoroughly and uniformly incorporated into the top 1 to 2 inches of soil. Mechanical incorporation is not required if adequate rainfall for good crop and weed emergence occurs or irrigation is received within 7 days after application. Care must be taken so that incorporation equipment does not damage seed pieces or elongating sprouts.

**Early Post-emergence:** Apply this product from crop emergence to the 6 inch stage of growth. Do not apply this product post-emergence if Potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Apply this product pre-emergence after planting, after drag-off or early post-emergence through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section.

### Use Rates:

| Soil Texture | Rate (Qts./Acre)    |                     |
|--------------|---------------------|---------------------|
|              | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse       | 0.9                 | 0.9                 |
| Medium       | 1.2                 | 1.8                 |
| Fine         | 1.8                 | 1.8                 |

### Use Restrictions on Potatoes

- Do not apply to Sweet potatoes or Yams.
- Do not apply pre-plant.
- Do not make more than 1 application of this product per season.
- Application of this product on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

## RICE

### Additional Weeds Controlled

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control the following weeds in Rice: Junglerice and Sprangletop.

### Methods of Application, Timing and Rates

This product may be applied as a pre-flood, pre-emergence in dry-seeded or drilled Rice or as a delayed pre-emergence application in drilled dry-seeded Rice or as an early post-emergence in dry-seeded Rice. Treatments may be applied to conventional, reduced or minimum tillage and no-till (stale seedbed) Rice. The seedbed should be firm and free of clods and must be prepared to allow for good seed coverage. The use of a planter under conditions that do not allow good soil coverage of the Rice seed can result in reduced stand or stunting if this product contacts germinating Rice seed.

**Pre-Flood, Pre-emergence:** This product may be applied for pre-emergence weed control as a pre-flood, pre-rice germination herbicide in lightly incorporated dry-seeded Rice or on drilled Rice.

### Seeding Directions

For all Rice seed incorporation methods, seed must be incorporated shallowly or no more than 1 inch below soil surface. Seed left on the surface may be injured or killed by this product. **However, to ensure that seed is not covered too deeply, 15 to 20% of seed total has to be visible at surface.** Increase seeding rates by a percentage corresponding to the amount of seed left on the surface. Adjust seeding ratios to meet individual practices, incorporation depths and field conditions. **For Example:** Target seeding rate is 150 pounds per acre. If approximately 15% of seed is left on soil surface, seeding rate should then be increased 22.5 pounds per acre to 177.5 pounds per acre.



Seeding depths can be affected by soil textures, tillage practices, irrigation and methods of mechanical incorporation. Seed that is incorporated either mechanically and/or by irrigation flush must remain at a shallow depth of no more than 1 inch below the soil surface. Fields where Rice seed is incorporated too deeply will experience reduced crop stands.

Following are examples of typical implements that can be used for Rice seed incorporation: Rice roller/ridger, ring roller, light harrow, or flat roller. Regardless of the implement or method of incorporation used, seed incorporation must be less than 1 inch below the soil surface.

After Rice seed is incorporated, uniformly apply to soil surface as broadcast spray the tank mixture of this product at 1.2 quarts of this product per acre plus FirstChoice® SafeGuard™ spray adjuvant at 0.8 quart per acre. Use of this product without tank mixing with FirstChoice SafeGuard spray adjuvant can result in crop injury and loss of Rice stand.

After herbicide application, flush field with irrigation water with method best employed to facilitate a thorough soaking of field and a rapid drain. Recirculate and contain in the field of initial application tail water (runoff water) from flood irrigation that contains this product or use only on adjacent crops for which this product or other pendimethalin-based products is registered for use.

Rice seed covered with water for longer than 8 days may result in reduced stand and weed control.

**Delayed Pre-emergence (Except CA):** Apply this product alone or with tank-mix partner for delayed pre-emergence weed control in grain-drilled, dry-seeded Rice. Apply this product alone or in tank-mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with this product may be injured. Apply only when growth conditions favor vigorous Rice growth. The seedbed should have adequate moisture for seed germination.

Uniformly apply the specified rate of this product after Rice planting and before Rice and weed emergence (spiking). Apply after the Rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch of rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80% of germinated seeds have a primary root (radicle) or shoot at least one-half inch long. If there is insufficient moisture, flush before application of this product to supply moisture for root (radicle) initiation and for vigorous Rice and weed growth.

If applied to soil prior to these conditions or to cracked soil, stand reduction or stunting of Rice may occur. Under some conditions, use of gibberellic acid-treated seed, heavy rainfall after application or flushing after application may result in herbicide injury to Rice. Rice can overcome moderate injury with appropriate cultural practices.

Due to the residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal Rice growth and activity of this product.

**Early Post-emergence:** Apply this product as a tank-mix partner. Base applications on weed and crop size guidelines of the tank-mix partner. Do not apply to fields with standing water. If necessary, fields may be flushed prior to treatment to produce vigorous Rice and weed growth. Since soil and weeds must be completely exposed to spray coverage, no flood water should be on the field at the time of application. Cloddy soil, standing water (puddles) at the time of application or cracks in the soil that form after application may result in reduced weed control.

Because of residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal Rice growth and activity of this product.

Since the residual activity of this product is activated by moisture, this product is most effective in controlling emerging weeds when adequate rainfall or irrigation (flush) is received within 7 days after application.

#### Use Rates:

| Delayed Pre-Emergence Applications                       |                  |
|--|------------------|
| Soil Texture   | Rate (Qts./Acre) |
| Sand, Loamy sand   | DO NOT USE       |
| Sandy loam   | 0.9              |
| Loam, Silt loam, Silt, Sandy clay loam                   | 1.2              |
| Silty clay loam, Clay loam, Sandy clay, Silty clay, Clay | 1.2              |

| Early Post-Emergence Application |                  |
|----------------------------------|------------------|
| Soil Texture                     | Rate (Qts./Acre) |
| Coarse                           | 0.9              |
| Medium                           | 1.2              |
| Fine                             | 1.2              |

#### Use Restrictions on Rice

- Do not apply this product as a pre-flood, pre-emergence treatment in Rice unless tank mixed with FirstChoice SafeGuard spray adjuvant.
- Do not apply this product through any type of irrigation system.
- Do not apply in liquid fertilizer.
- Do not use on water-seeded rice except as specified in other labeling.
- Do not apply to Rice fields if fields are used for fish production, especially catfish or crayfish farming.
- Do not use water containing residues of this product from Rice cultivation to irrigate food or feed crops that are not registered for use with this product.
- In case of a crop failure due to weather conditions or disease following treatment with this product alone or in a tank-mixture, only drilled dry-seeded Rice may be immediately replanted. However, the grower assumes all risks and consequences associated with replanting of Rice because there is the potential for stand reduction or stunting. A 10% percent increase in seeding rate is suggested. Replant seed below the herbicide layer because reduced stand or stunting may occur if this product contacts germinating Rice seed. Do not replant with gibberellic acid-treated seed. Do not reapply this product alone or in a tank mixture.
- Do not apply this product and then flush for germination.
- Do not apply to stressed Rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage or deep water after application.
- Do not apply early pre-emergence or pre-plant incorporated as severe Rice injury is possible.
- Do not feed forage or graze livestock in treated fields.

#### SOYBEANS (Except CA)

##### Additional Weeds Controlled

In addition to the weeds listed in the "WEEDS CONTROLLED" table, this product will control or reduce competition from the following weeds in Soybeans: Itchgrass and Red rice. (See "Use Rates" below for specific rates for these weeds.)

#### Methods of Application, Timing and Rates

Apply this product in conventional, minimum or no-till as a Fall surface, Fall incorporated, pre-plant surface, pre-plant incorporated or pre-emergence application in Soybeans.

**Fall Applications:** This product may be surface applied or incorporated in the Fall, after Fall harvest and prior to ground freeze in states North of Interstate-80 and the entire states of Iowa, Illinois, Indiana, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma and Texas. Fall applications of this product will not provide season-long weed control.

**Pre-plant Surface:** Apply this product up to 15 days prior to planting. This product may be applied up to 45 days prior to planting when used in a tank-mix or applied sequentially with glyphosate plus imazethapyr, imazamox or imazethapyr. Apply tank-mixes of this product and sequential programs as specified under the tank-mix section.

**Pre-plant Incorporated:** Apply this product up to 60 days prior to planting and incorporate within 7 days after application.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting. Apply to a firm seedbed free of clods. Do not make applications of this product pre-emergence North of Interstate-80 except in the states of Indiana, Michigan and Ohio or as specified in the supplemental labeling.

#### Use Rates:

| Fall Surface, Fall Incorporated, Pre-Plant Surface or Pre-Plant Incorporated Applications |                     |                     |
|---|---------------------|---------------------|
| Soil Texture  | Rate (Qts./Acre)    |                     |
|   | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse  | 0.9                 | 1.2                 |
| Medium  | 1.5*                | 1.8                 |
| Fine**  | 1.8                 | 1.8                 |

\*Do not exceed 1.0 quart of this product per acre for Southern states. See map for specific States in the "USE AREA" section.

\*\*For heavy clay soils, apply this product at the broadcast rate of 1.8 quarts of this product per acre.

| Pre-Emergence Applications |                     |                     |
|----------------------------|---------------------|---------------------|
| Soil Texture               | Rate (Qts./Acre)    |                     |
|                            | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse                     | 0.9                 | 0.9                 |
| Medium                     | 1.2                 | 1.2                 |
| Fine                       | 1.2                 | 1.5                 |

| Pre-Plant Incorporated Applications for Red Rice Control and Itchgrass Suppression |                          |
|--|--------------------------|
| Soil Texture   | Rate (Qts./Acre)         |
|  | Up to 3% Organic Matter* |
| Coarse   | 1.8                      |
| Medium   | 1.8                      |
| Fine   | 2.4                      |

\*This use is not for soils with more than 3% organic matter.

### Use Restrictions on Soybeans

- Do not apply post-emergence on Soybeans or serious crop injury can result.
- Do not use this product in Soybeans in California.
- Do not apply within 85 days of harvest.
- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Soybean fields.

## STRAWBERRIES

### Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Stunting, reduced growth, or reduction in daughter plants may occur with this use. Uniformly apply 0.9 to 1.8 quarts of this product per acre as a broadcast spray to the soil surface at pre-transplant time. A second application of 0.9 to 1.8 quarts of this product per acre may be applied in a band to the soil between crop rows 35 days before harvest but DO NOT CONCENTRATE THE RATE per acre into the treated area. Do not allow spray to contact Strawberry plants. The second application rate is based on per unit of treated area.

**Chemigation:** This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the "APPLICATION INSTRUCTIONS" section. Do not allow irrigation water treated with this product to contact Strawberry plants.

### Use Rates:

| Soil Texture | Broadcast Rate (Qts./Acre) |
|--------------|----------------------------|
| Coarse       | 0.9                        |
| Medium       | 1.2 to 1.5                 |
| Fine         | 1.5 to 1.8                 |

### Use Restrictions on Strawberries

- Do not apply more than 1.8 quarts of this product per acre per application.
- Do not apply more than 3.6 quarts of this product per acre per season.
- Do not apply within 35 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply if row is to be covered later with plastic.

## SUGARCANE

### Methods of Application, Timing and Rates

- Apply this product pre-emergence through layby to plant or ratoon Sugarcane.
- Applications may be made band or broadcast. Although there may be adequate crop tolerance for post-emergence applications at layby, spray must be directed under the Sugarcane canopy to obtain effective weed control.
- This product must be thoroughly and uniformly incorporated into the soil with either (a) mechanical incorporation equipment as outlined below or (b) with rainfall or irrigation, if rainfall or irrigation is adequate for good crop and weed emergence and received within 7 days after application. If rainfall or irrigation is not obtained, incorporate this product mechanically.

**Mechanical Incorporation:** Apply this product to loosened beds and incorporate into the top 1 to 2 inches of soil within 7 days after application.

**Use Rates:**

| Use Area                 | Broadcast Rate* (Qts./Acre) |
|--------------------------|-----------------------------|
| All States except Hawaii | 2.4 to 3.6                  |
| Muck soil (Florida only) | 2.4 to 4.85                 |
| Hawaii                   | 2.4 to 4.85                 |

\*Use the high rate if: i) Clay soils. ii) No mechanical incorporation is planned. iii) Heavy weed populations are anticipated. iv) Itchgrass infestation is anticipated. v) Shaving is planned.

**Use Restrictions on Sugarcane**

- Do not exceed 7.2 quarts of this product per acre in one growing season.
- Do not use less than 11 gallons of water as a carrier when applying this product for weed control.
- Ratoon Sugarcane must be lightly shaved in early spring to remove the old stubble before incorporation over the line of Sugarcane if possible. Carefully adjust equipment to incorporate without causing excessive damage to emerging shoots.
- Do not make aerial applications at close-in because complete and uniform coverage cannot be obtained.
- Do not apply through any type of irrigation system.
- Do not apply within 90 days of harvest.
- Do not graze treated fields or feed treated forage or fodder to livestock.

**SUNFLOWER****Methods of Application, Timing and Rates**

- Apply this product pre-plant incorporated in all states.
- Fall pre-plant incorporated applications may be made in Minnesota, North Dakota and South Dakota.
- Apply this product pre-emergence in conventional tillage Sunflower except in California.

**Note:** Plant Sunflower 1.5 to 2 inches deep and completely cover with soil.

**Pre-plant Incorporated (Spring):** Apply up to 60 days prior to planting and incorporate within 7 days after application.

**Pre-plant Incorporated (Fall Applications in Minnesota, North Dakota and South Dakota):** Apply this product and immediately incorporate in late Fall prior to planting Sunflower the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes. Do not apply when air temperature is below 45°F. Prior to planting Sunflower in the Spring, fields treated with this product should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

**Pre-emergence:** Apply this product at planting or up to 2 days after planting. Pre-emergence applications of this product to Sunflowers may increase the likelihood of crop injury especially when Sunflowers are grown in stress situations such as compacted soils. Decreased herbicide performance compared to pre-plant incorporated applications may also result from a pre-emergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures following planting are forecasted, apply this product prior to planting and mechanically incorporate with tillage.

**Use Rates:**

| Pre-Plant Incorporated (Spring) or Pre-Emergence (Conventional Tillage) |                  |                     |                     |
|---|------------------|---------------------|---------------------|
| Soil Texture  | Southern States* | Northern States     |                     |
|   | Rate (Qts./Acre) | Rate (Qts./Acre)    |                     |
|   |                  | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse  | 0.9              | 1.2                 | 1.2                 |
| Medium  | 1.2              | 1.5                 | 1.8                 |
| Fine  | 1.8              | 1.8                 | 1.8                 |

\*See map of specific states under the "USE AREA" section.

| Pre-Plant Incorporated (Fall) Application* |                     |                     |
|--|---------------------|---------------------|
| Soil Texture                               | Rate (Qts./Acre)    |                     |
|  | ≤ 3% Organic Matter | > 3% Organic Matter |
| Coarse                                     | 1.5                 | 1.5                 |
| Medium                                     | 1.8                 | 2.1                 |
| Fine                                       | 2.1                 | 2.1                 |

\*For use in Minnesota, North Dakota and South Dakota only.



## SUNFLOWER (No-Till) (Except CA)

### Methods of Application, Timing and Rates

Apply this product at 2.8 quarts per acre up to 30 days before planting (pre-plant) up to immediately after planting (pre-emergence).

This product is most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application.

### Use Restrictions (All Tillage Types)

- Do not apply this product post-emergence.
- Do not feed forage or graze livestock in treated sunflower fields.
- Do not use in California.

## TOBACCO

### Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or as a layby application in transplanted Tobacco.

**Pre-plant Incorporated:** Apply this product with ground sprayer up to 60 days prior to transplanting Tobacco and incorporate within 7 days after application.

Applied according to directions and under normal growing conditions, this product will not harm transplanted Tobacco. Under stress conditions for plant growth such as cold/wet or hot/dry weather, this product can produce a temporary retardation of Tobacco development.

**Layby:** This product may be applied as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting Tobacco. Apply this product in a 16 to 24 inch band between the crop rows. The spray should not contact Tobacco plants.

### Use Rates:

| Pre-Plant Incorporated Application                                   |                               |                  |
|--|-------------------------------|------------------|
| Use Area   | Soil Texture                  | Rate (Qts./Acre) |
| Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia | Coarse                        | 1.2              |
|  | Medium: Sandy clay loam, Loam | 1.2              |
|  | Medium: Silt loam, Silt       | 1.5              |
|  | Fine                          | 1.5              |
| Other States   | Coarse                        | 1.2              |
|  | Medium                        | 1.8              |
|  | Fine                          | 1.8              |

| Layby Application |                  |
|-------------------|------------------|
| Soil Texture      | Rate (Qts./Acre) |
| Coarse            | 0.9              |
| Medium            | 1.2              |
| Fine              | 1.2              |

### Use Restrictions on Tobacco

Do not apply as a broadcast spray as contact may cause malformed Tobacco leaves.

## WHEAT

### Methods of Application, Timing and Rates

- Apply this product by ground or air.
- Apply this product pre-emergence, delayed pre-emergence or post-emergence to Wheat for weed control in the Fall, Winter or Spring seeded Wheat

**Pre-emergence, Delayed pre-emergence or Post-emergence:** Apply to a seedbed that is firm and free of clods and trash. The seedbed MUST be prepared to ensure good seed coverage by the soil and seed-to-soil contact. Use high quality seed. When applications of this product are intended to be made pre-emergence or delayed pre-emergence, plant seed at least 1 inch deep to avoid possible crop injury, but not too deep for proper germination. When applications of this product are intended to be made post-emergence, plant seed at least 0.5 inch to 1.0 inch to avoid crop injury.

Uniformly apply this product as a pre-emergence or delayed pre-emergence (after Wheat seed has germinated) or post-emergence treatment from the 1st leaf stage of Wheat until before the flag leaf is visible/emerged for weed control. Apply this product prior to weed emergence. Emerged weeds will not be controlled by this treatment. Adequate rainfall or irrigation within 7 days after application will provide the most consistent weed control.

For control of established weeds, this product may be tank-mixed with any post-emergence herbicide(s) registered for use in Wheat. This product will provide residual control of the weeds listed in this label. Always perform a mixing test to check the compatibility of this product with all potential tank mix partners.

#### Use Rates:

| Soil Texture | Southern States*<br>(Qts./Acre) | Northern States*<br>(Qts./Acre) |
|--------------|---------------------------------|---------------------------------|
| Coarse       | 0.9 to 1.2                      | 0.9                             |
| Medium       | 0.9 to 1.8                      | 1.5                             |
| Fine         | 1.2 to 1.8                      | 1.2 to 1.8                      |

\*See map for specific States in the "USE AREA" section.

#### Use Restrictions on Wheat

- Do not apply more than 1.8 quarts of this product per season.
- If loss of grain crop occurs, any crop registered for this product pre-plant incorporated use may be replanted the same year without adverse effects. Do not replant Wheat.
- Do not apply this product within 60 days of harvest of Wheat grain or straw.
- Do not apply this product within 28 days of harvest of Wheat hay.
- Do not apply this product within 11 days of harvest of Wheat forage.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Do not store below 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals redissolve.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### CONTAINER HANDLING:

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Refillable Container (≥ 250 gallons & Bulk):** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**WARRANTY—CONDITIONS OF SALE**

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. To the extent consistent with applicable law, Manufacturer makes no other warranties or representations of any kind, expressed or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

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